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PAPERS AND DESPATCHES

RELATING TO THE

ARCTIC SEARCHING EXPEDITIONS

OF 1850-51-52.

TOGETHER WITH A FEW BRIEF REMARKS AS TO THE

Probable Course pursued by Sir John Franklin.

ILLUSTRATED BY A GENERAL MAP OF THE POLAR REGIONS,
A CHART OF THE FIELD OF SEARCH, AND
A SPECIAL MAP OF BEECHEY ISLAND.

COLLECTED AND ARRANGED

BY

James Mangles, Commander, R.N.

Second Edition,

WITH COPIOUS ADDITIONS.

LONDON:

FRANCIS & JOHN RIVINGTON,
ST. PAUL'S CHURCH YARD, AND WATERLOO PLACE.
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The Section which accompanies the Pamphlet is a tenth part of the Admiralty Chart of the North Polar Sea; consequently, ten such would include the whole area of the Arctic Regions.

The simple method of working the keys (see the five examples given) is the same as that devised for the suggested "UNIVERSAL ILLUSTRATED GEOGRAPHY AND HYDROGRAPHY". In the large work, no more difficulty would be experienced in ascertaining the precise position of any required place in the world, generally, than is here encountered in discovering—by means of the Keys, Beechey Island, Cape Herschel, Cape Sir John Franklin, or any other point included in our Arctic List.

ILLUSTRATED GENERAL GAZETTEER.

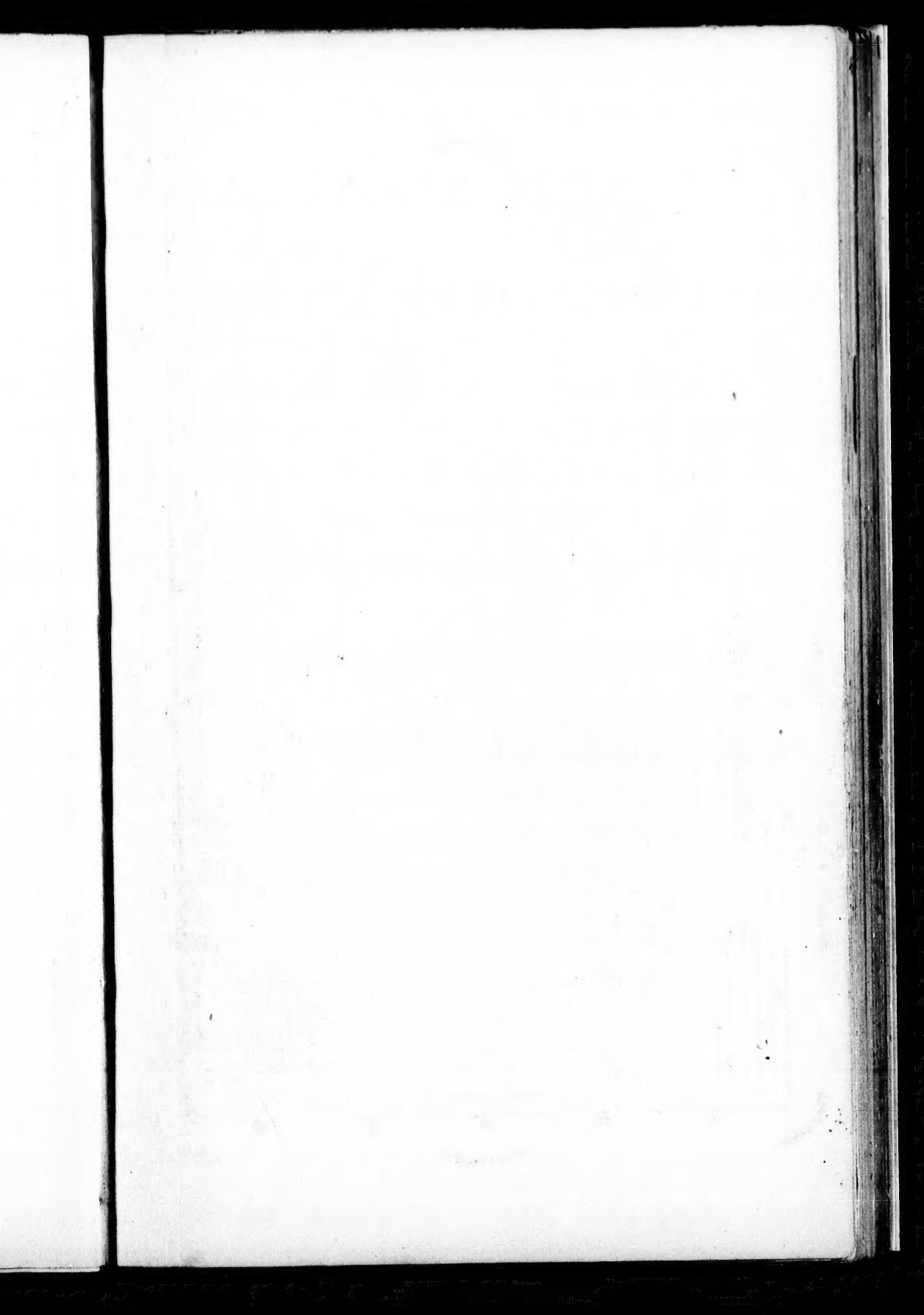
In One Volume, Imperial 8vo.

AN Illustrated Gazetteer, founded on a new and original principle, is in course of preparation.

One of the distinguishing features of this work, will be the employment of a progressive series of Topographical Vignettes, through the medium of which, Description will be combined with practical Illustration.

By the adoption, likewise, of a novel species of arrangement, an immense range and facility of Reference will be afforded within a comparatively limited compass; and in lieu of the present cumbrous and teasing system of isolated alphabetical sequence, the forthcoming work will give places, cities, and natural features in their *connected* and collateral relation.

A detailed prospectus will be shortly issued.



TO FIND A PLACE IN THE LIST.

How, in the first instance, should we look for *Cape Herschel*, and at once regardless of latitude and longitude, obtain a key to it, and to 482 other adjacent places?

EXAMPLES :—

No. of Map	Position		NAMES OF Places.	Definition.	Country. Locality.	Province.	Quarter.	Latitude.	Longitude.	Authority.	Population.	Remarks.
	Square.	Bracket. Symbol.										
1501	B iv	9	o Cape Herschel	Cape	N. Devon.	..	Amer.	74°53'N.	89°20'W.	Adm. Chart	..	
			Cape Riley ...	Cape	N. Devon.	..	Amer.	74°45'N.	90°53'W.	Ditto	..	
	D iv	1	9 Cape Bird ...	Cape	N. Somrst.	..	Amer.	72°1'N.	94°38'W.	Ditto	..	
			Cape Sir Jn. Franklin }	Cape	Albert Ld.	..	Amer.	77°6'N.	100°20'W	Ditto	..	
			Cape Lady Franklin ... }	Cape	Beauf. Ld.	..	Amer.	76°47'N.	101°40'W	Ditto	..	

ALPHABETICAL LIST OF PLACES.

(482)

WELLINGTON CHANNEL SECTION.

To find a Place upon the Chart.

Look for the name in the alphabetical list: for example *Herschel, Cape*.

In the *first column* stands B iv—the square in which the place is situated upon the map.

In the *second column* appears 9 —the compartment of that square where the place will be found.

In the *third column* o (*West*) stands the symbol by which the exact locality in the department is indicated.

So that the person in search of a place reads (in this instance) *B—four—nine—West*; and burthens his memory with these data only whilst turning from the list to the map.

Position.				Position.				Position.				Position.			
NAMES		Square.	Bracket.	NAMES		Square.	Bracket.	NAMES		Square.	Bracket.	NAMES		Square.	Bracket.
OF PLACES.			Symbol.	OF PLACES.			Symbol.	OF PLACES.			Symbol.	OF PLACES.			Symbol.
Abandon Bay...	B iv	4	0	Blackwood Pnt.	E ii	7	0	Coulman, Cape.	C iii	9	0	Gladman Point.	E iii	4	0
Adair Cape...	C vii	2	0	Blairs Islands.	D iv	7	0	Coutts, Cape...	D vii	1	0	Glen Island...	E v	8	0
Adam Island...	E iii	5	0	Blue Hills...	B ii	1	0	Coutts Inlet...	D vii	1	0	Gloucester, Cp.	E iii	2	0
Adelaide Bay...	C iv	8	0	Booth Point...	E iii	8	0	Craufurd, Cape.	C v	5	1	Graham Moore,	B iii	5	0
Adelaide Pen- insula...	E iii	7	0	Boothia...	D iii, iv	0	0	Cresswell Bay.	D iv	1	0	Bay...	B iii	5	0
Boothia, Gulf of	E iv, v	0	0	Boothia, Isth.	E iv	1	0	Crimson Cliffs.	B vii	1	0	Graham Moore	C vi	8	0
Boothia, Isth.	E iv	1	0	Bounty, Cape...	B ii	5	0	Croker Bay...	C v	2	0	Cape...	C vi	8	0
Bounty, Cape...	B ii	5	0	Bowden, Cape...	B iv	8	0	Croker, Cape...	E i	5	0	Granite, Cape...	C iii	6	0
Bowden, Cape...	B iv	8	0	Bowen, Cape...	C vi	9	0	Culgruff Point.	E iii	1	0	Grant Point...	E iii	7	0
Bowen Port...	C iv	9	0	Bowen Port...	C iv	9	0	Cunningham, C.	B v	9	0	Griffin Point...	B iv	7	0
Brodie Bay...	E viii	3	0	Bowen Port...	C iv	9	0	Cunningham	C iv	1	0	Griffith Cape...	E vi	1	0
Brentford Bay.	D iv	1	0	Brodie Bay...	E viii	3	0	Cunningham	B v	0	0	Griffith Island.	C iv	1	0
Bridport Inlet.	B ii	5	0	Brentford Bay.	D iv	1	0	Mountains	B v	0	0	Griffith Point...	B ii	6	0
Brooking Cum- ing Inlet...	C v	1	0	Bridport Inlet.	B ii	5	0	Dalrymple's Rk.	A vi	9	0	Grimble Islands.	D iv	1	0
Brown Island...	D iv	1	0	Brooking Cum- ing Inlet...	C v	1	0	Dealy Island...	B ii	5	0	Grinnell, Cape.	B iv	8	0
Brown Point...	E ii	4	0	Brown Island...	D iv	1	0	Dease Points...	E i	6	0	Hakluyt Island.	A vi	8	0
Browne Island.	B iii	9	0	Brown Point...	E ii	4	0	Dease Strait...	E i	2	0	Halkett Point...	E v	8	0
Browne Islds.	A viii	9	0	Browne Islds.	A viii	9	0	Decision, Point.	B iv	4	0	Hallowell, Cape.	E v	2	0
Buchan Bay...	E i	1	0	Buchan Bay...	E i	1	0	De Haven, Cape.	B iv	7	0	Halse, Cape...	B ii	5	0
Buchan Island.	B vii	5	0	Buchan Bay...	E i	1	0	Dépôt Point...	B iv	7	0	Hamilton Bay...	D vii	1	0
Bullen, Cape...	C v	2	0	Buchan Island.	B vii	5	0	Devil's Point...	B viii	3	0	Hansteen Lake.	E iii	6	0
Bunn Inlet...	E v	5	0	Bullen, Cape...	C v	2	0	Douglas Bay...	E iii	6	0	Hardwick, Cp.	B vi	1	0
Bunny, Cape...	C iv	1	0	Bunn Inlet...	E v	5	0	Duck Lake...	C iv	7	0	Harrison Island.	E iv	6	0
Burnet Inlet...	C v	1	0	Bunny, Cape...	C iv	1	0	Dudley Diggs, C.	B vii	1	0	Harry Goodsir	B iii	2	0
Burney, Cape...	C vi	5	0	Burnet Inlet...	C v	1	0	Dundas Cape...	B i	6	0	Inlet...	B iii	2	0
Bushman, Cove	B ii	1	0	Burney, Cape...	C vi	5	0	Dunira Bay...	A viii	8	0	Hathorn, Cape.	D vii	1	0
Bushman Isld.	A vii	8	0	Bushman, Cove	B ii	1	0	Eardley Bay...	C v	4	0	Hay, Cape...	C vi	4	0
Bute Island...	D viii	4	0	Bushman Isld.	A vii	8	0	Eardley Wilmot,	C v	4	0	Hearne, Point...	B ii	4	0
Byam Strait...	B ii	4	0	Bute Island...	D viii	4	0	Cape...	B iv	9	0	Hecla and Fury	E iv	2	0
Byam Martin I.	B iii	4	0	Byam Strait...	B ii	4	0	Edgeworth, Cp.	E iii	5	0	Islands...	E iv	2	0
Byam Martin	C v	4	0	Byam Martin I.	B iii	4	0	Edwards, Cape.	B ii	1	0	Hecla & Griper	B ii	2	0
Mountain...	C v	4	0	Byam Martin	C v	4	0	Edwards, Point.	E i	2	0	Bay...	B ii	2	0
Byron Bay...	E i	1	0	Mountain...	C v	4	0	Eglinton, Cape.	D vii	3	0	Helen Island...	E iv	8	0
Caledon, Cape.	B v	3	0	Byron Bay...	E i	1	0	Elizabeth Har.	D iv	7	0	Herschel, Cape.	B iv	9	0
Calthorpe Islds.	E vi	4	0	Caledon, Cape.	B v	3	0	Ellice, River...	E ii	7	0	Herschel, Cape.	E iii	4	0
Cambridge Bay.	E i	3	0	Calthorpe Islds.	E vi	4	0	Elwin Bay...	C iv	6	0	Hewitt, Cape...	D iv	4	0
Campbell Bay.	E ii	4	0	Cambridge Bay.	E i	3	0	Elwin Bay...	C iv	6	0	Heytesbury, C.	D iv	4	0
Cargenholt, C.	D vii	1	0	Campbell Bay.	E ii	4	0	Elwin Bay...	C v	6	0	Hingston Bay...	B vii	6	0
Carrick Moore,	C iv	4	0	Cargenholt, C.	D vii	1	0	Englehead, Cape.	E v	2	0	Hogarth Point...	B iv	5	0
Cape...	D iv	4	0	Carrick Moore,	C iv	4	0	Everitt Point...	E i	4	0	Home Bay...	E vii	2	0
Cary Islands...	A vi	1	0	Cape...	D iv	4	0	Fanshawe, Cape.	C vi	5	0	Home, Cape...	C v	2	0
Castlereagh, Cp.	C vi	4	0	Cary Islands...	A vi	1	0	Fearnall Bay...	D iv	1	0	Honeyman Isld.	E v	5	0
Castor & Pollux	C iv	4	0	Castlereagh, Cp.	C vi	4	0	Felix, Cape...	E iii	1	0	Hooper Cape...	E viii	3	0
River...	E iii	9	0	Castor & Pollux	C iv	4	0	Felix Harbour.	E iv	2	0	Hooper Inlet...	E v	6	0
Caswell's Tower	B iv	8	0	River...	E iii	9	0	Fellfoot, Cape...	C iv	3	0	Hooper Island.	B ii	1	0
Catharine Isds.	E iii	6	0	Caswell's Tower	B iv	8	0	Finlayson Bay.	E v	8	0	Hope Bay...	E i	5	0
Chapman, Cape	E iv	6	0	Catharine Isds.	E iii	6	0	Finlayson Isld.	E i	3	0	Hopkins Inlet...	E v	5	0
Chapman's Island	E i	4	0	Chapman, Cape	E iv	6	0	Fisher, Cape...	A ii	8	0	Hopner, Cape.	B ii	1	0
Charles York	C v	6	0	Chapman's Island	E i	4	0	Fishers Islands.	E i	4	0	Hopner, Cape.	A vi	9	0
Cheese Island.	E i	4	0	Charles York	C v	6	0	Fitzgerald Bay.	D iv	3	0	Horsburgh, C.	B vi	7	0
Chester Bay...	E ii	4	0	Cheese Island.	E i	4	0	Fitzgerald Isld.	E ii	4	0	Horse's Head...	B viii	3	0
Christian, Cape.	D vii	6	0	Chester Bay...	E ii	4	0	Flinders, Cape.	E i	1	0	Hotham, Cape...	C iv	1	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Foggy Bay...	E i	6	0	Houston Stewart	B iii	6	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Four Rivers,	C iii	9	0	Island...	C iii	9	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Bay of...	C iii	9	0	Howe Harbour.	C iii	9	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Franklin Bay...	E v	5	0	Humphrey Head	C v	8	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Franklin, Cape...	C v	6	0	Hurd, Cape...	A v	9	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Franklin, Cape...	E i	1	0	Hurd, Cape...	C iv	3	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Franklin Inlet...	E iv	5	0	Igloodik...	E vi	4	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Franklin Point...	E iii	1	0	Innes Point...	D vii	7	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Fury Point...	C iv	8	0	Isabella Bay...	B iv	8	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Fury & Hecla	E vi	1	0	Isabella, Cape.	A vi	4	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Straight...	E vi	1	0	Isabella, Cape.	E iii	6	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Galina Point...	E i	4	0	Jackson Inlet...	C iv	9	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Garnier Bay...	C iv	5	0	Jameson, Cape.	D vii	1	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Garrett Island.	B iii	8	0	Jameson Islands.	E i	4	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Garry Bay...	E v	8	0	James Ross's	E ii	1	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Garry, Cape...	D iv	1	0	Farthest...	E ii	1	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Garry, River...	E iii	6	0	James Ross,	E iii	2	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Gascoigne Inlet.	B iv	8	0	Straight of...	E iii	2	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Geddes, Cape...	E iii	7	0	Jekyll, Lake...	E iv	1	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Gernon Bay...	E ii	7	0	John Barrow Id.	A iii	9	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Gifford, Cape...	C iv	1	0	Jones Sound...	B v	3	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Gifford, River...	E v	3	0	Kater, Cape...	D iv	8	0
Christian, Cape.	D vii	6	0	Christian, Cape.	D vii	6	0	Gillman, Cape.	B iii	4	0	Kater, Cape...	D viii	6	0

NAMES
OF
PLACES.

Keith Bay ...
Keith Island ...
Kent Bay ...
Kjer, Cape ...
Knight Island ...
Konig, Cape ...
Krusestn, Lks ...
Kull Island ...
Labrynth Bay ...
Lady Anne Bay ...
Lady Franklin C ...
Lady Melville ...
Lake ...
Lady Parry Id. ...
Lancaster Snd. ...
Lang, River ...
Lax Isl. & Har ...
Leopold, Cape ...
Leopold Island ...
Leopold, Port ...
Lewis, Cape ...
Liddon, Gulf ...
Liddon, Island ...
Limestone Cape ...
Lindsey, Cape ...
Liverpool, Cape ...
Lofty Cliff ...
Logan Port ...
Lord Lindsay R ...
Lord Mayor's B ...
Low Point ...
Lowers Island ...
McClintock Cp ...
McDonall, Cape ...
McGillivray Bay ...
Mackenzie Inle ...
MacLoughlin B ...
MacLoughlin C ...
Macoonich Id ...
McTavish Point ...
Maculoch Cape ...
Magnetic Pole ...
Maneetkallig ...
Mount ...
Maret Island ...
Maria Gloria, C ...
Martin Islands ...
Martyr, Cape ...
Mary Jones' ...
Bay ...
Matty Island ...
Maxwell Bay ...
Melbourne Isl ...
Melville Bay ...
Melville, Cape ...
Melville Island ...
Melville's Monu ...
ment ...
Melville Penin ...
Melville Snd.

The
area embrac
The named l
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each and all

Position.			Position.			Position.			Position.			Position.						
Square.	Bracket.	Symbol.	NAMES OF PLACES.	Square.	Bracket.	Symbol.	NAMES OF PLACES.	Square.	Bracket.	Symbol.	NAMES OF PLACES.	Square.	Bracket.	Symbol.	NAMES OF PLACES.	Square.	Bracket.	Symbol.
E iii	4	0	Keith Bay	E iv	0	0	Middle Lake ..	E iv	4	0	Providence Cp..	B i	6	0	Stair, Cape	A vi	0	0
E v	0	0	Keith Island ..	E ii	0	0	Milne Island ..	B iii	5	0	Queen's Chann.	B iii	2	0	Stanley River..	E iv	1	0
E iii	0	0	Kent Bay.....	E iii	2	0	Minto Islands..	E i	6	0	Radstock Bay..	B iv	3	0	Stewart Point..	E ii	0	0
B iii	0	0	Kjer, Cape	E iv	5	0	Morris, Cape ..	A vii	0	0	Red Head	B viii	3	0	Stratton Inlet..	C v	0	0
C vi	0	0	Knight Island..	D iv	7	0	Mout, Cape ...	A v	9	0	Regent Inlet ..	C iv	1	0	Sugar Loaf Is..	B vii	3	0
C iii	0	0	Konig, Cape ...	E vi	2	0	Mudge, Cape ..	B ii	2	0	Rennell, Cape..	C iv	1	0	Surprise, Point	B iv	4	0
C iii	0	0	Krusestn. Lks.	E iv	1	0	Mundy Harbour	E iv	2	0	Richards Bay..	E v	6	0	Suskowallick ..	A vii	8	0
E iii	0	0	Kull Island....	E iv	5	0	Munro Point ...	E i	1	0	Richardson, Cp.	E v	8	0				
B iv	0	0	Labyriuth Bay..	E i	6	0	Murdoch, Cape.	A vii	9	0	Richardson Put.	E iii	8	0	Sussex Mtns..	D i	8	0
E vi	0	0	Lady Anne Bay..	B v	6	0	Murray Bay ...	D iv	4	0	Rigby Bay	B iv	9	0	Thom Bay	E iv	1	0
C iv	0	0	Lady Franklin C.	A iii	8	0	Murray Maxwell	E vi	1	0	Riley Bay	E i	1	0	Thom Island ...	A viii	2	0
B ii	0	0	Lady Melville ..	E iv	4	0	Inlet.....	E v	6	0	Riley, Cape....	B i	5	0	Three Capes ...	B i	2	0
B iv	0	0	Lake	E iv	4	0	Navy Board In..	C v	6	0	Robertson, Cape	A vi	5	0	Thunder Cove..	E iii	8	0
D iv	0	0	Lady Parry Id..	E iv	2	0	Neill Port	C iv	9	0	Roper, Cape ...	D viii	8	0	Todd Islands ..	B i	4	0
A vi	0	0	Lancaster Snd..	C v, vi	1	0	Nias, Cape	E viii	1	0	Rosamond Cape	C v	2	0	Toonoodleed B.	E iv	4	0
E v	0	0	Lang, River ...	D iv	1	0	Nias Point	B ii	2	0	Rosen Island ..	D iv	7	0	Trap, Cape	E i	3	0
E v	0	0	Lax Isl. & Har.	E iv	1	0	Nicolai Ist Cape	D iii	8	0	Ross Point	B ii	6	0	Tulloch Point..	E iii	8	0
B ii	0	0	Leopold, Cape..	B vi	4	0	North Channel..	B iv	1	0	Ross Point	E iii	8	0	Turnagain Point	E i	1	0
D vii	0	0	Leopold Island.	C iv	6	0	North Somerset	C iv	1	0	Roxborough, C.	E i	6	0	Twins	E iv	5	0
E iii	0	0	Leopold, Port..	C iv	6	0	Ogden Bay	E ii	8	0	Sabine, Cape ..	E iii	2	0	Union River ...	C vi	2	0
B vi	0	0	Lewis, Cape ...	A viii	7	0	Ogle Point	E iii	8	0	Sabine Island..	B ii	2	0	Victoria, Cape.	E iii	2	0
E iv	0	0	Liddon, Gulf ..	B ii	1	0	Ooglit	E vi	7	0	Sabine Islands.	A viii	7	0	Victoria Harb..	E iv	2	0
B iii	0	0	Liddon, Island.	E v	3	0	Ooglit Island ..	E vi	4	0	Saunarez, Cape	A vi	5	0	Victoria Island.	D i, E i	1	0
D vii	0	0	Limestone Isld.	C iv	1	0	Opertwick	B viii	6	0	Scoresby, Cape.	D iv	4	0	Wadworth Isld.	C iii	0	0
B i	0	0	Lindsay, Cape..	B v	6	0	O'Reilly Island.	E iii	7	0	Scoresby, Cape.	B iv	4	0	Wakeham Pnt..	B ii	4	0
C vi	0	0	Liverpool, Cape	C vi	5	0	Ormond Island.	E v	3	0	Scott Inlet	D vi	2	0	Walker Bay	E i	4	0
B ii	0	0	Lofty Cliff ...	D vii	2	0	Osborn, Cape ..	B v	9	0	Scott Point	E iii	6	0	Walker, Cape ...	A viii	7	0
E iv	0	0	Logan Port	D iv	4	0	Osborne, Cape..	B iv	3	0	Seddon, Cape ..	A viii	8	0	Walker, Cape ...	C iii	3	0
B iii	0	0	Lord Lindsay R.	E iv	1	0	Oscar Bay	E iii	3	0	Selkirk Bay ...	E v	8	0	Wall, Bay	E iii	1	0
E iv	0	0	Lord Mayor's B.	E iv	1	0	Owen, Lake	E iv	1	0	Selkirk, Cape ..	E iii	7	0	Walter Bathurst	C vi	5	0
B ii	0	0	Low Point	D viii	4	0	Palmer Point ..	B ii	5	0	Separation Pnt.	B iv	7	0	Warrender Bay.	E i	5	0
E iv	0	0	Lowther Island.	B iii	9	0	Palmerston, Cp.	D iv	7	0	Seppings, Cape.	C iv	6	0	Warrender, Cp.	C v	3	0
B iv	0	0	McClintock Cp.	C iv	5	0	Parry Bay	E i	5	0	Shackleton Cp..	B viii	6	0	Waterfall	C iv	8	0
E iii	0	0	McDonall, Cape	D iv	4	0	Parry, Cape	E iii	2	0	Sherer, Mount ..	C iv	9	0	Wellington Bay	D i	9	0
D viii	0	0	McGillivray Bay	E iii	4	0	Parry, Cape	E v	6	0	Sheriff Harbour	E i	1	0	Wellington	B iv	7	0
D iv	0	0	MacKenzie Inlet	E v	5	0	Parry Islands {	A i, ii	1	0	Simpson Pen- }	E iv	9	0	Wheat Island ..	E v	8	0
B viii	0	0	MacLoughlin B.	E iii	8	0	Parry Point ...	E i	1	0	Simpson Strait.	E iii	7	0	White Sound ..	A vi	6	0
B viii	0	0	MacLoughlin C.	E v	8	0	Pateshall, Cape	B v	8	0	Simpson's Fur-	E iv	7	0	Whaler Point ..	C v	6	0
B viii	0	0	Macoonoche Id.	E iii	8	0	Peaked Hill ...	D vii	6	0	theat	E iv	7	0	Whiffen Inlet ..	E v	5	0
E viii	0	0	McTavish Point	E ii	8	0	Peckell Point ..	E iii	3	0	Sir James Ross'	E iv	5	0	White, Cape ...	A vi	9	0
C v	0	0	Maculloch Cape	C vi	1	0	Peel, Cape	E i	2	0	Peninsula	E iv	5	0	White Bear Pnt.	E i	7	0
E v	0	0	Magnetic Pole..	E iii	2	0	Peffer, River ..	E iii	8	0	Sir John Frank-	A iii	9	0	Whyte Inlet ..	B v	2	0
E viii	0	0	Maneetkalig ..	E iv	1	0	Pelly Bay	E iv	8	0	lin, Cape	E iv	4	0	Wilcox Point ..	E vii	3	0
E v	0	0	Mareet Island..	E i	4	0	Pelly, Mount ..	E ii	1	0	Skagavoke	E iv	9	0	Willersted Lake	E iv	7	0
B i	0	0	Maria Gloria, C.	E iii	3	0	Petowaak	B vii	1	0	Skene Bay	B ii	5	0	Willmot Bay ...	E iii	4	0
E i	0	0	Martin Islands..	E iv	2	0	Pingitkalik ...	E v	4	0	Skene's Islands	A vii	9	0	Willmot Islands.	E i	4	0
E v	0	0	Martyr, Cape ..	C iv	1	0	Pootes Bay	E iii	6	0	Skeoch Bay	E vi	1	0	Wiuter Harb..	B ii	4	0
B ii	0	0	Mary Jones's	E iv	1	0	Ponds Bay	C vi	8	0	Smith Point ...	E iii	7	0	Wollaston	D viii	8	0
A vi	0	0	Bay	E iv	1	0	Porden Islands.	E i	4	0	Smith Sound ..	A vi	4	0	Wollaston Isld.	C vi	4	0
B vi	0	0	Matty Island ..	E iii	6	0	Possession Bay.	C vi	6	0	Smythe, Cape ..	E iii	5	0	Wolstenholme	B vi	3	0
B viii	0	0	Maxwell Bay ..	B iv	9	0	Possession, Mt.	C vi	6	0	Snares Island..	C iii	2	0	Wolstenholme	B vii	7	0
C iv	0	0	Melbourne Isld.	E ii	4	0	Poucoet Island.	D iv	8	0	Somerville Isld.	C iii	5	0	Wolstenholme	B vii	7	0
B iii	0	0	Melville, Cape.	A vii	8	0	Powell Inlet ...	C v	1	0	Sons of the	E iv	4	0	Wolstenholme	B vii	7	0
C iii	0	0	Melville Island.	B ii	8	0	President Bay..	B iv	8	0	Clergy Islands	E iv	4	0	Wolstenholme	B vii	7	0
C v	0	0	Melville's Cape.	A vii	8	0	Pressure, Cape.	C iv	4	0	Sophia, Cape ..	A iii	9	0	Wolstenholme	B vii	7	0
A v	0	0	Melville's Monu-	A viii	7	0	Prince Alfred B.	B iv	2	0	South Channel..	E iv	4	0	Wolstenholme	B vii	7	0
C iv	0	0	ment	A viii	7	0	Prince Regent's	A vii	8	0	Sowallick Point	A vii	8	0	Wolstenholme	B vii	7	0
E vi	0	0	Melville Penin.	E v, vi	1	0	Bay	A vii	8	0	Spence Bay	E iii	6	0	Wolstenholme	B vii	7	0
B iv	0	0	Melville Snd. {	E i	5	0	Princess Char-	B vi	4	0	Spencer, Cape..	B iv	8	0	Wolstenholme	B vii	7	0
D viii	0	0					lotte Monum.											
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The Section is a piece of the Admiralty North Polar Chart, 1849, and of the same scale. The whole area embraced is 655 geographical miles by 1000. Artificial features, such as villages or towns, there are none. The named localities, all natural, number about 482, of which there are on our section 167; the absentees, transposed from the Admiralty two-sheet Chart of Arctic America, 1849, and introduced by symbols, amount to 315, each and all found independent of latitude and longitude.

DISTRIBUTION OF ANIMALS AVAILABLE AS FOOD IN THE ARCTIC REGIONS.*

- I.—NORTH STAR, Master Saunders, wintered at *Wolstenholme Sound*, September 30th to August 1st, 1849-50; during the whole period obtained but fifty hares and a few wild ducks; several foxes also shot.—*Nautical Magazine*, November 1850.
- II.—ENTERPRISE and INVESTIGATOR, Captain J. C. Ross, wintered in Port Leopold 1848-49. Account kept on board the last named vessel shows the "number of birds killed to have amounted to about 4,000, yielding near 2,500 lbs. of meat. But more than this was obtained if the number shot by individuals for amusement, and not always noted, be included.—*Nautical Magazine*, XIX, p. 166.
- III.—Sir John Ross, when at *Boothia Felix*, 1829-33, found musk oxen, deer, bears, foxes, hares, &c., frequent; and partridges, ptarmigans, and ducks, numerous. Salmon were very abundant in the lakes—in one instance (see *Voyage*, p. 583) 3,378 were taken at a single haul. The fish averaged, when cleaned, 3 lbs.
- IV.—Sir W. E. Parry, wintering at *Melville Island*, 1819-20, found Polar hare very abundant—considerable numbers shot during the summer as a supply of provisions for the ships' companies—average weight about 8 lbs. Musk oxen, only three killed. Rein-deer in considerable numbers from May to October—twenty-four were killed during that interval. Snow bunting very numerous. Rock grouse in great abundance—are easily killed, especially in the breeding season, when the female will suffer herself to be taken on the nest. Killed in considerable numbers at *Melville Island* as a supply of provisions to the ships' companies. Golden plover in considerable abundance. Ring plover abundant on the shores of *Possession Bay* and *Prince Regent's Inlet*. Brent goose in great numbers on the island. King duck very abundant.
- V.—Parry (1821-23) referring to *Melville Peninsula*, says (*Voyage*, p. 512), that "the rein-deer are killed by the Esquimaux in great abundance in the summer season. For several weeks in the course of the year the natives retire to the banks of lakes in the interior, which they represent as abounding with salmon, while the pasture near them affords good feeding to numerous herds of deer."

* Where the vegetable matter of the earth's surface is carpeted with snow, the purity of the air must be great, and high winds, unchecked by forests, must convey horizontally any scent to an amazing distance; but to the keen noses of carnivorous creatures, the smoke and fumes from fried animal matter must be enticing from an immense range. It is comforting to think that this power of allurements will assist Franklin's means of sking out his existence.

Extract from (page 75) Captain Beechey's *North Polar Voyage*, H.M.S. DOROTHEA and TRENT, under Captain David Buchan.

"We set fire to some sea-horse fat, in order to entice within reach of our muskets any bears that might be ranging the ice. About midnight, the agreeable odour of the burnt blubber brought a white bear within musket range, which we killed and captured."

VI.—ARCTIC SEARCHING EXPEDITIONS, 1850–51. (*From Arrowsmith's recent Map.*) The following are Lieut. McClintock's and Capt. Penny's accounts of animals killed or seen.

LIEUT. MCCLINTOCK (in *Melville Island*).

Musk Oxen	4 killed	46 seen.
Rein Deer	1 "	34 "
Bears	2 "	10 "
Wolf	1 "	0 "
Hares	7 "	81 "
Lemming	1 "	0 "
Ptarmigans	20 "	80 "
Ravens	2 "	0 "
Snow Owls and Snow Buntings seen.		

CAPT. PENNY (in *Victoria Channel*).

Ptarmigans	3 killed—many more seen.
Ducks	many shot—thousands more seen.
Sea Fowl of all sorts—	numerous.
Foxes	a few seen.
Bears	4 killed—35 seen.
Seals	3 killed—abundance seen.
Walrus	1 killed—abundance seen.
Rein Deer	1 killed—aherd of 20 or 30 seen.
Hares	14 killed.

BACK KEY OF REFERENCE.

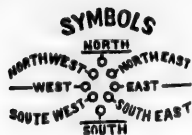
WELLINGTON CHANNEL SECTION.

(315 PLACES.)

To find a Name from the Symbol and Compartments, &c. upon the Map.

EXAMPLE.—What place is indicated by $\rightarrow$ (West), compartment **9**, in B iv square?

In the *Table of Reference*, under B iv square, in the first column stands **9** and opposite the symbol $\rightarrow$ (West), bracketed on to the **9**, stands *Cape Herschel*, the name sought.



BRACKETS.

1	2	3
4	5	6
7	8	9

Square	Bracket.	Symbol.	NAMES OF PLACES.	Square	Bracket.	Symbol.	NAMES OF PLACES.	Square	Bracket.	Symbol.	NAMES OF PLACES.	Square	Bracket.	Symbol.	NAMES OF PLACES.
A vi	9	o	Dalrymple Rock	B viii	6	o	Hingston Bay	D vi	1	o	Cp. Heytesbury	E ii	1	o	Mount Pelly
A vii	8	o	Sowallick Point	C iii	2	o	Operulwick	4	o	o	Babbage Bay	o	o	o	Back Point
9	o	o	Suskowallick	3	o	o	Young Island	o	o	o	Cape McDoual	4	o	o	Brown Point
8	o	o	Skene's Island	0	o	o	Somerville Isld.	o	o	o	Port Logan	o	o	o	Fitzgerald Isld.
A iii	7	o	Thom Island	9	o	o	Cape Granite	7	o	o	Cp. Carrick More	o	o	o	Campbell Bay
7	o	o	Meiville's Monument	8	o	o	Wadworth Isld.	o	o	o	Rosen Island	2	o	o	River Ellice
B i	6	o	Cape Dundas	9	o	o	Howe Harbour	o	o	o	Athol Island	o	o	o	White Bear Pnt.
6	o	o	Cape Hay	0	o	o	Bear Island	7	o	o	Knight Island	o	o	o	Gernon Bay
B ii	1	o	Cape Providence	9	o	o	Cape Coulman	o	o	o	Cp. Palmerston	7	o	o	Atkinson Point
1	o	o	Cape Hoppner	0	o	o	Bay of Four Rivers	o	o	o	Blair's Islands	o	o	o	Blackwood Pnt.
0	o	o	Bushman Cove	C iv	8	o	Limestone Isld.	7	o	o	Auwuk-too-te-ak River	8	o	o	Keith Island
9	o	o	Hooper Island	1	o	o	Cape Bunny	8	o	o	Elizabeth Har.	9	o	o	Chester Bay
8	o	o	Point Nias	0	o	o	Cape Anne	0	o	o	Cape Allington	0	o	o	McTavish Pnt.
7	o	o	Point Reid	9	o	o	Cape Martyr	D vii	1	o	Poucoet Island	1	o	o	Stewart Point
6	o	o	Cape Mudge	8	o	o	Cunningham In.	o	o	o	Goutt's Inlet	1	o	o	Wall Bay
5	o	o	Point Hearne	7	o	o	Cape Gifford	o	o	o	Cape Coutts	0	o	o	Culgruff Point
4	o	o	Pnt. Wakeham	6	o	o	Cape Fellfoot	9	o	o	Cape Antrobis	0	o	o	Beaufort Islds.
3	o	o	Cape Halse	5	o	o	Cape Pressure	8	o	o	Cape Jameson	1	o	o	Kent Bay
2	o	o	Cape Bounty	4	o	o	Garnier Bay	7	o	o	Cp. Cargeholm	2	o	o	Cape Victoria
1	o	o	Dealy Island	3	o	o	Cp. McClintock	6	o	o	Cape Hathorn	3	o	o	Cape Gloucester
0	o	o	Palmer Point	2	o	o	Clarence Point	5	o	o	Hamilton Bay	4	o	o	Cape Parry
B iii	9	o	Beverley Inlet	1	o	o	Whaler Point	4	o	o	Lofty Cliff	5	o	o	Cape Sabine
9	o	o	Point Ross	0	o	o	Cape Seppings	3	o	o	Cape Eglington	6	o	o	Oscar Bay
8	o	o	Byam Strait	9	o	o	Elwin Bay	2	o	o	Peaked Hill	7	o	o	Cape Maria
7	o	o	Bering Island	8	o	o	Union River	1	o	o	Cape Christian	8	o	o	Gloria
6	o	o	Cape Gillman	0	o	o	Duck Lake	0	o	o	Black Bluff	9	o	o	Cape Herschel
5	o	o	Houston Stew. I.	9	o	o	Adelaide Bay	D viii	1	o	Agnes Monumt.	1	o	o	Gladman Point
4	o	o	Allison Inlet	8	o	o	Waterfall	0	o	o	Low Point	0	o	o	Cape Edgeworth
3	o	o	Garrett Island	7	o	o	Jackson Inlet	9	o	o	Bute Island	1	o	o	Adam Island
2	o	o	Bedford Bay	6	o	o	Port Neill	8	o	o	Isabella Bay	7	o	o	Cape Smyth
1	o	o	Baker Island	5	o	o	Mount Sherer	7	o	o	Apparent Harb.	6	o	o	Matty Island
0	o	o	Browne Island	4	o	o	Benjamin Hob-	6	o	o	Alexander Inlet	5	o	o	Beverley Islds.
B iv	9	o	Cape Scoresby	3	o	o	house Inlet	5	o	o	Wollaston Group	4	o	o	Poetes Bay
8	o	o	Point Surprise	2	o	o	Stratton Inlet	4	o	o	Parry Point	3	o	o	Cape Christian
7	o	o	Point Decision	1	o	o	Burnet Inlet	3	o	o	Byron Bay	2	o	o	Frederick
6	o	o	Abandon Bay	0	o	o	Powell's Inlet	2	o	o	Cape Franklin	1	o	o	R. Garry
5	o	o	Barlow Inlet	9	o	o	Brooking Cum-	1	o	o	Cape Flinders	0	o	o	Lake Hansteen
4	o	o	Pnt. Separation	8	o	o	ing Inlet	0	o	o	Cape Peel	9	o	o	Artists' Bay
3	o	o	Cape De Haven	7	o	o	Cape Bullen	9	o	o	Munro Point	8	o	o	Cape Isabella
2	o	o	Point Griffin	6	o	o	Cape Rosamond	8	o	o	Cobban Point	7	o	o	Spence Bay
1	o	o	Dépôt Point	5	o	o	Eardley Bay	7	o	o	Edwards Point	6	o	o	Catharine Islds.
0	o	o	Innes Point	4	o	o	Cape Franklin	6	o	o	Finlayson Isld.	5	o	o	Scott Point
B v	9	o	Cape Spencer	3	o	o	Elwin Bay	5	o	o	Cape Alexander	4	o	o	McGillivray Bay
8	o	o	Beechev Bay	2	o	o	Cape Chas. York	4	o	o	Cambridge B.	3	o	o	Smith Point
7	o	o	Caswall's Tower	1	o	o	Wollaston Isds.	3	o	o	Cape Trap	2	o	o	Grant Point
6	o	o	Cape Grinnell	0	o	o	Cp. Castlereagh	2	o	o	Jameson Islds.	1	o	o	Wilmot Bay
5	o	o	Gascoyne Inlet	9	o	o	(Byam Martin	1	o	o	Coronation	0	o	o	McLoughlin B.
4	o	o	Radstock Bay	8	o	o	Mountains	0	o	o	Gulf	9	o	o	Adelaide Pen-
3	o	o	Cape Eardley	7	o	o	Mnt. Possession	9	o	o	Galina Point	8	o	o	insula
2	o	o	Wilmot	6	o	o	Cape Fanshawe	8	o	o	Walker Bay	7	o	o	Cape Geddes
1	o	o	Rigby Bay	5	o	o	Cape Burney	7	o	o	Chapman Island	6	o	o	Tulloch Point
0	o	o	Cape Herschel	4	o	o	Cape Graham	6	o	o	Marcet Island	5	o	o	Douglas Bay
B vi	9	o	Cape Pateshall	3	o	o	Cape Moore	5	o	o	Porden Islands	4	o	o	R. Pepper
8	o	o	Cunningham	2	o	o	Cape Maculloch	4	o	o	Wilmot Islands	3	o	o	Ross Point
7	o	o	Mountains	1	o	o	Sussex Mtns.	3	o	o	Point Everitt	2	o	o	Booth Point
6	o	o	Cape Osborn	0	o	o	Wellington Bay	2	o	o	Fisher's Islands	1	o	o	Todd Islands
5	o	o	Banks's Bay	9	o	o	Armitage Point	1	o	o	Parry Bay	0	o	o	Thunder Cove
4	o	o	Petowaak	8	o	o	Cape Bird	0	o	o	Melville Id.	9	o	o	Richardson Pt.
3	o	o	Horse's Head	7	o	o	Cape Fearnall Bay	9	o	o	Warrender Bay	8	o	o	Maconochie Id.
2	o	o	Wilcox Point	6	o	o	Lang River	8	o	o	Hope Bay	7	o	o	Ogle Point
1	o	o	Sugar Loaf Is.	5	o	o	Browns Island	7	o	o	Buchan Bay	6	o	o	Pechell Point
0	o	o		4	o	o	Grimble Islands	6	o	o	Thom Bay	5	o	o	Barrow Inlet
				3	o	o	Apparent Harb.	3	o	o	Lord Lindsay R.	4	o	o	Castor & Pollux
				2	o	o	Murray Bay	2	o	o	Mt. Manetkalig	3	o	o	River
				1	o	o	Cape Scoresby	1	o	o	Krusenstern Lk.	2	o	o	Cape Selkirk
				0	o	o		0	o	o	Lake Jekyll	1	o	o	Lake Owen

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NAMES
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Sheriff Harb.
Lord Mayor's B.
Lax Id and Har
Mundy Harb.
Martin Islands
Victoria Harb.
Lady Parry Id.
Hecla & Fury Isls
Astron. Socy. Is.
Middle Lake
Willersted Lake
Lady Melvill I.
Toonoodleed B.
Skagavoke
Sons of the
Clergy Ids.
Sir Jas. Ross's
Peninsula
Cape Kjer
Franklin Inlet
Kull Island
Harrison Isls.
Twins
Cape Berens
Cape Chapman
Pelly Bay
Helen Island
Simpson Pen
Lake Ballenden
Clouston Points

Cape Hallowell
Autridge Bay
Whyte Inlet
Cape Englefield
Amherst Island
Liddon Island
Ormond Island
Cape Parry
Franklin Bay
Baker Bay
Hopkin's Inlet
Whiffen Inlet
Bunn Inlet
Mackenzie In.
C. Arrowsmith
Honeyman Id.
Black Inlet
Richards Bay
Sp. Richardson
Finlayson Bay
Sp. MacLoughlin
Corcoran Point
Glen Island
W. G. Smith B.
Halkett Point
Belkirk Bay
Amittioke

Cape Griffith
Murray Max-
well Inlet
Kooch Bay
Cape Konig
gloodik
Irignuk
Ingikalik
Doglit Islands
Salthorpe Isld.
gwissowik

Cape Nias
Brodie Bay

THE

ARCTIC EXPLORING EXPEDITIONS.

(Extracted from the Nautical Magazine, October 1851.)

A REVIEW OF THE PROCEEDINGS OF THE ARCTIC SEARCHING EXPEDITIONS,
under the Command of Captain H. T. Austin, C.B., and Captain Penny,
with the recent despatches.

"ARCTIC intelligence which concerns so numerous a portion of our countrymen abroad, and therefore deeply interesting to us at home, has now become of so much importance, that we need offer no other reason for allowing it to occupy so large a share of our attention. We shall, therefore, not only gratify our own readers now, but our absent voyagers hereafter, by preserving a full record of their gallant doings.

"Captain Penny has returned with his ship the *LADY FRANKLIN*,* and has brought 'favourable' intelligence, for such is the concluding sentence of the

* With the view of facilitating a reference to the names of all the vessels and their several officers on these expeditions, we insert here the following list of them.

I.—H.M.S. *RESOLUTE*.—Captain, Horatio T. Austin; Lieutenants, R. D. Aldrich, William H. J. Browne; Master, Robert C. Allen; Surgeon, Abraham R. Bradford; Paymaster and Purser, John E. Brooman; Mates, Richard B. Pearce, Walter W. May, John P. Cheyne; Assistant Surgeon, Richard King; Second Master, George F. McDougal.

II.—H.M.S. *ASSISTANCE*.—Captain, Erasmus Ommanney; Lieutenants, Francis L. McClintock, James E. Elliott, George F. Mechem; Surgeon, James J. L. Donnett; Mates, George R. Keene, Richard V. Hamilton; Assistant Surgeon, Charles Ede; Second Master, Frederick J. Krabbé; Clerk in Charge, Edward N. Harrison; Clerk, Charles Richards, (b).

III.—H.M.S. *PIONEER*, steam tender to *RESOLUTE*.—Lieutenant, Sherard Osborn; Assistant Surgeon, Thomas R. Pickthorne; Second Master, John H. Allard.

IV.—H.M.S. *INTREPID*, steam tender to *ASSISTANCE*.—Lieutenant, B. Cator; Assistant Surgeon, John Ward (a); Second Master, William Shellabeer.

V.—*LADY FRANKLIN*.—Captain, W. Penny; Executive, First Mate, Mr. John Marshall; Second Mate, Mr. John Leiper; Third Mate, Mr. John Stewart; Surgeon, Mr. Thomas Goodsir; Interpreter, Mr. Petersen.

VI.—*SOPHIA*, tender to the *LADY FRANKLIN*.—Captain, Alexander Stewart, Commander; Executive, First Mate, Mr. Donald Manson; Second Mate, Mr. James Reid; Surgeon, Mr. Peter Sutherland.

VII.—*FELIX*.—Captain, Sir John Ross, R.N., accompanied by Commander Phillips.

VIII.—*MARY*, yacht tender to *FELIX*.

IX.—U.S.S. *ADVANCE*.—Lieutenant Commander, E. J. De Haven (Philadelphia), Commander of the Expedition; Master (acting), W. H. Meersdaugh (Norfolk); Midshipman, W. S. Lovell (New York); Surgeon, Dr. Kane; Crew, 15.

X.—U.S.S. *RESCUE*.—Master Commander, Passed Midshipman, J. P. Griffin (Savannah); Master (acting), R. R. Carter (Virginia); Midshipman, — Brooks; Surgeon, Dr. Vreeland (New York); Crew, 13.

XI.—*THE PRINCE ALBERT*, commanded by Mr. Kennedy, sailed for *Prince Regent's Inlet* in May last. The vessels under the orders of Captain Austin sailed in May 1850.

We also add here the *ENTERPRISE* and *INVESTIGATOR*, having gone to the Polar Sea by *Behring Straits* in January 1850.

XII.—*ENTERPRISE*.—Captain, R. Collinson, C.B.; Lieutenants, George A. Phayre, John J. Barnard; Additional, Charles T. Jago; Surgeon, Robert Anderson; Mates, M. T. Parkes, Rowland T. G. Legg; Assistant Surgeon, Edw. Adams; Second Master, Francis Skead; Clerk in Charge, Edw. Whitehead.

XIII.—*INVESTIGATOR*.—Commander, Robert J. L. M. McClure; Lieutenants, William H. Haswell, Samuel G. Cresswell; Surgeon, Alexander Armstrong, M.D.; Mates, Robert J. Wynniatt, Henry H. Sainsbury; Assistant Surgeon, Henry Piers; Second Master, Stephen Court.

despatch with which he was charged by Captain Austin. We congratulate Captain Penny on his safe arrival, as well as his own brave followers who have contributed so much to produce the favourable aspect which the whole subject has now assumed. Painful as it is to contemplate the condition of Franklin and his people, locked up so long from us, it seems to have fallen to the lot of Captain Penny to clear up in a great degree the perplexing doubts which have hitherto existed as to the route adopted by him in 1846. His letters, as well as Captain Austin's despatches, are before the world, and we hope in the course of these remarks to shew to our readers that by the knowledge we have gained of *Wellington Strait*, the prospect of further information respecting the missing expedition assumes a very fair degree of probability.

"While Captain Austin and his officers were examining every portion of coast which led towards *Melville Island*, removing all possible speculations that Franklin had adopted the route to *Behring Strait* by the southward and westward, Captain Penny and his party were exploring new ground up the *Wellington Strait*, and with sledges and boats have opened out a navigation leading to the north-westward of the *Parry Islands*, which by many is believed to be that which was adopted by Franklin. We, however, do not join in this opinion, and these are our reasons for thus differing from so general an assumption. *Wellington Strait* is the contracted outlet of this navigation into *Barrow Strait*, and the ice brought by winds and tides from the north-west obstructs its passage, and hence becomes mostly impassable. It was closed during the late visit of our ships; and although to all appearance it was open when passed and repassed in 1819 and 1820 by Sir Edward Parry, it must be remembered that he would be able to see about twelve or fourteen miles only from the entrance, and it is not likely that he could say whether this channel, of forty-five miles in length, was open or not.

"Franklin having passed his first winter at *Beechey Island*, took care beyond a doubt fully to acquaint himself with the nature and extent of the icy barrier, which we have reason to conclude so effectually bound his entrance into Penny's open sea beyond it, and which his reconnoitring parties must have discovered; and therefore seeing the impossibility of cutting his way through (for we learn from Captain Penny that such an attempt would have been fruitless when he was there), he might then have abandoned all hope of passing through that channel, retrace his course through *Barrow Strait*, and hasten at once to the northward up *Baffin Bay*, with the natural conclusion that *Jones* or *Smith Sound* offered the only probable road for reaching it.

"Much has been said about the hurry in which Franklin left his winter quarters at *Beechey Island*, and that it had the appearance of a retreating party. We do not exactly understand what is meant by hurry and retreating. True it is, and much to be lamented, that no written document has been found there, to throw any light on his intended proceedings; but in our opinion had Sir John Franklin passed by that strait,* he would have left some document to say so, and as he failed in his attempt, it is quite possible that he might have thought it unnecessary to leave memoranda at each

* This reasoning is hardly applicable here. Assume the ice to have suddenly cleared in the West Channel, would he not have "hurried" off? Would it not have been, quick! quick!! bear a hand everywhere and with everything? Till he had actually passed the Strait he could leave no document; and as to his intended proceedings, his being where he was shewed what his intentions were; and if Franklin found an opening into that "clear sea" seen by Penny, most assuredly he dashed into it, with his eagle eye and keen mind looking only forward to the bow, not one instant would he spare to heave-to and send a boat ashore to put up a post; no, he would naturally say, "We will do that when we are stopped and can advance no farther this season." What evidence have we that Penny's open sea was not open in 1846-7-8-9? and, if it was clear water there, would Franklin leave so promising a range of navigable water bearing away to the tempting north-west, and expanding in width from twenty miles to upwards of forty miles? Would he be likely to turn his back on these hopeful appearances, seen, and consequently believed, to run due east past *Cape Warrender* about one hundred and sixty miles, and about one hundred more miles due north to *Jones's* ten miles wide Sound, with no ascertained promising points of encouragement? I think not.

point of failure, and considered that the unequivocal mark of his visit, without comment, might serve to demonstrate his abandonment of the route by *Wellington Strait*.*

"Captain Austin was fully aware that Captain Penny's orders were 'in the first instance specially to examine *Jones Sound*', proceeding by it in the direction of *Wellington Strait*, and on to the *Parry Islands*, and this not having been done, was an additional inducement for Captain Austin to prosecute his search in that direction. And yet opinions appear to be entertained both for and against the probability of Captain Austin's return to England, in the course of the present autumn, although there is no part of his despatch that can in any way warrant the former conclusion.

"We are disposed to believe that the return of Captain Austin's expedition this year will entirely depend upon the success or failure of his attempt to reach *Penny's open sea* by *Jones Sound*. Should this prove an available channel, it is a manifest absurdity to expect Austin home this winter. Is it likely that any officer, much more one of Captain Austin's zeal and devotion to the cause in which he is embarked, would go to *Jones Sound*, merely to reconnoitre the entrance and then return? And is it not equally certain, that if he once penetrated into the open sea by that Sound, he could not return to England this year if he would?

"On the other hand, if Captain Austin finds *Jones Sound* impassable, or a blind channel, we confess that we are at a loss to know what better step he could take than to return with his ships to England, and start afresh in the spring of next year.†

"But for the solution of these and many other questions which it presents, we must patiently wait the issue of time, or perhaps in the midst of our speculations, the arrival of that hardy old seaman Sir John Ross with the next despatch from Captain Austin himself; satisfied we may be that everything at home has been done that could be, and that as much has been effected abroad as circumstances permitted, and as even the most sanguine amongst us could have expected.

"Opinions of parties who appear to be ill-informed on this subject have been freely delivered, condemning Captain Austin's proceedings, and producing an impression on the public mind highly unfavourable to that officer. To say the least, this is not only unfair, but it is ungenerous. The whole subject is not only important at the present moment, but it is most especially necessary, that clear and comprehensive views should be taken of it, so that the real motives which are directing Captain Austin's (we will say judicious) exertions should be clearly understood.

"The expedition under Captain Austin has been pronounced a failure—the fairest expedition which ever left this country has been declared ineffective, because its leader has chosen to adopt a course under circumstances that he considers to be the most proper one, but which does not appear to be understood by these writers. One speaks of Franklin taking the middle passage across the bay as an index of his knowledge of the subject, when he ought to know that Franklin's ships adopted the usual track through *Melville Bay*, and were last seen in the parallel of *Lancaster Sound*, in the upper part of the bay, standing for its entrance. Again Captain Austin is blamed for turning his back on *Wellington Channel*, when he had satisfied himself that the passage by *Cape Walker* was closed against him, and for intimating his intention of pursuing his search by *Jones Sound*.

"It is asked why did not Austin proceed up *Wellington Channel*? For this plain reason we may answer, because he saw that unhappily there lay a stout barrier‡ of ice between him and the open sea beyond it of some twenty or

* What proof have we that the *Wellington Strait* was abandoned?

† Where to go? and what to attempt?

‡ Surely if this "barrier" was so deliberately seen as it was, we might expect a closer estimate of its extent than a jump of ten miles, from twenty to thirty. This very barrier is the key, the whole key, and nothing but the key, to the entire question.

thirty miles extent, which not only it was impossible for his ships to penetrate, but in all probability had been equally fatal to the progress of Sir John Franklin's. This we consider to be a sound reason why Austin turned his back on *Wellington Channel* and for pursuing his search by *Jones Sound*. We must not lose sight of the main object of Captain Austin's expedition. It is simply, if possible, to trace step by step the missing ships in their progress, and we therefore quite agree with him in the conclusion at which he arrived, or at least such is our construction of its meaning—that having made up his mind that Franklin after failing in *Wellington Strait*, had gone to *Jones Sound*, he would at once follow him there, rather than penetrate the icy barriers of that strait even if it had been practicable. For let us ask what possible service towards the great object of Austin's expedition would have resulted, had his ships reached *Queen Victoria Channel*, and thence pushed on to the north-west with the unhappy chance of having left the missing ships behind them! This dilemma Austin has wisely avoided.

"But we will now refer to the opinions of our most experienced and eminent officers on the necessity of not only exploring *Jones Sound* as intended by the Admiralty orders, but of the probability of that being the route which was adopted by Sir John Franklin, and these we find in a useful little volume from the pen of Mr. P. L. Simmonds, which appeared only a few months ago.

"Sir F. Beaufort says, Sir John Franklin is not a man to treat his orders with levity,* and, therefore, his first attempt was undoubtedly made in the direction of *Melville Island* to the westward. If foiled in that attempt, he naturally hauled to the southward, and using *Banks Land* as a barrier against the northern ice, he would try to make westing under its lee. Thirdly, if both of these roads were found closed against his advance, he perhaps availed himself of one of the four passages between *Parry Islands*, including the *Wellington Channel*—or, lastly, he may have returned to *Baffin Bay*, and taken the inviting opening of *Jones Sound*.

"Sir E. Parry says, and this idea receives no small importance from the fact (said to be beyond a doubt) of Sir John Franklin having before his departure expressed such an intention in case of failing to the westward: 'Much stress has likewise been laid, and I think not altogether without reason, on the propriety of searching *Jones* and *Smith Sound* in the north-eastern part of *Baffin Bay*. Considerable interest has lately been attached to *Jones Sound*, from the fact of its having been recently navigated by at least one enterprising whaler, and found to be of great width, free from ice, with a swell from the westward, and having no land visible from the mast-head in that direction. It seems more than probable, therefore, that it may be found to communicate with *Wellington Strait*; so that if Sir John Franklin's ships have been detained anywhere to the northward of the *Parry Islands*, it would be by *Jones Sound* that he would probably endeavour to effect his escape, rather than by the less direct route of *Barrow Strait*. I do not myself attach much importance to the idea of Sir John Franklin having so far retraced his steps as to come back through *Lancaster Sound*, and recommence his enterprise by entering *Jones Sound*; but the possibility of his attempting his escape through this fine opening, and the report (though somewhat vague) of a cairn of stones seen by one of the whalers on a headland within it, seems to me to render it highly expedient to set this question at rest by a search in this direction, including the examination of *Smith Sound*.'

"Sir J. Richardson observes also, 'With respect to *Jones Sound*, it is admitted by all who are intimately acquainted with Sir John Franklin, that his first endeavour would be to act up to the letter of his instructions,† and

* Certainly not; but from the very nature of things these orders must be based on contingencies, hedged in with I.R.s. Where the packed ice says No, it peremptorily dictates, "disobey your orders, and obey me."

† Yes, if the ice would let him; but here the ice dictates and will take no denial; and the best reasoning on the whole subject is that which is based on the probable or improbable, and the possible or impossible condition of the ice.

that, therefore, he would not lightly abandon the attempt to pass *Lancaster Sound*. From the logs of the whalers year after year, we learn that when once they have succeeded in rounding the middle ice, they enter *Lancaster Sound* with facility. Had Sir John Franklin then gained that *Sound*, and from the premises we appear to be fully justified in concluding that he did so, and had he afterwards encountered a compact field of ice barring *Barrow Strait* and *Wellington Sound*, he would then, after being convinced that he would lose the season in attempting to bore through it, have borne up for *Jones Sound*, but not until he had erected a conspicuous landmark, and lodged a memorandum of his reason for deviating from his instructions.

"Dr. McCormick also says, 'In renewing once more the offer of my services, which I do most cheerfully, I see no reason for changing the opinions I entertained last spring; subsequent events have only tended to confirm them. I then believed, and I do still, after a long and mature consideration of the subject, that Sir John Franklin's ships have been arrested in a high latitude, and beset in the heavy Polar ice northward of *Parry Islands*, and that their probable course thither has been through *Wellington Channel*, or one of the *Sounds* at the northern extremity of *Baffin Bay*.'

"To the foregoing we are enabled to add the opinion of the late Sir John Barrow, whose knowledge of Arctic navigation needs no comment here. Franklin was aware of Sir John Barrow's aversion to the *Wellington Channel*, because it was always blocked up with ice, and having himself found it so, he will follow his own inclination and try another channel to the northward.

"We repeat then that here is sufficient reason for Captain Austin, having satisfied himself by his own explorations that Franklin did not make his attempt southward or westward of the *Wellington Channel*, to proceed immediately to *Jones Sound*, looking to their lordship's intention and the impression which may now become strengthened with reference to their orders.

"Among other points for which Austin has been condemned is that of not supplying Captain Penny with assistance! and for what purpose? for effecting the very object which Captain Penny managed to attain without it. But let us see under what circumstances was Austin when he received this application.

"His letter tells us it was made on the 23rd of May, and that he regretted his 'remaining strength' did not admit of his placing at his disposal sufficient aid to convey a boat across the icy barrier* of *Wellington Channel*.

"Now it happens that at this very time Austin's limited searching parties were recovering from the effect of their journeys on the ice. They returned between the 27th of April and the 7th of May, and the extended parties, consisting of thirty-eight men, besides officers (as appears by the methodical tables attached to his letter), were still away, as they returned between the 28th of May and the 4th of July, having been absent since the 10th of April. What means then had Austin of meeting this demand (with auxiliary parties away also), and the remaining strength of those returned already exhausted by travelling, and which required to be recruited by rest rather than be again employed in doing for Captain Penny that which he contrived to do for himself? Was the service injured by this refusal? Not at all; and we do Captain Penny only justice in saying that he not only performed well what he undertook with his own means, but that this has been no complaint of his against Captain Austin. Of Captain Penny it has been predicted that in a few days he will be on his way to the Arctic waters. The lateness of the season at once threw doubt on the propriety of such a step, and it required the calm and deliberate consideration of men whose knowledge and experience of Arctic matters would enable them to decide whether a steam vessel should be sent with Captain Penny to communicate with the searching

* And what evidence have we that Franklin, in four or five years, found not this icy barrier open, knowing, as we do, what a gale of twelve-four or forty-eight hours, in a particular direction, sometimes effects in these regions.

ships this season or not! We read in the daily prints, under the head '*Naval*', that, 'in accordance with an Admiralty summons, Captain Sir Edward Parry, Captain Beechey, and Captain Sir James Clark Ross, attended at the Admiralty on Thursday (18th September) in order to meet the Board and their Hydrographer Rear Admiral Sir Francis Beaufort, and to consult on the proceedings of Captain Austin and Captain Penny in the late search for Sir John Franklin.'

"With the deliberations of that council we do not pretend to be acquainted, but any man who knows ice navigation in *Baffin Bay* will pronounce the decision of those officers, that no vessel should be sent this season, considering its advanced period, and under present circumstances, both as wise and discreet. Let us suppose a screw-steamer to leave this in a fortnight for *Baffin Bay*—for in less she could not do so—on a moderate speed of seven or eight knots (if she could do that) she would reach *Cape Farewell* (assuming her departure on the 3rd of October) about the middle of that month, to run the gauntlet as she might be able, between the middle and shore ice! If she did escape being beset and passing the approaching winter as the American vessels did the last in drifting about fixed in the ice, and even penetrated into *Jones Sound*, there may be no ships there, they may have reached the same open sea which Penny saw, and may be snugly wintering in one of its harbours. But the hope of a vessel getting so far at this late period of the season, and the uncertainty of finding any ships if she did, is too futile to be entertained for a moment; and the council has wisely discarded any such intention, and no one who is acquainted with the nature of the subject could otherwise desire.

"We must, therefore, for the present close our observations on Austin's proceedings; not, however, without expressing our admiration of that well-regulated and systematic management with which he has assigned to his officers their several duties, as well as of the energetic and noble spirit in which they have been performed. Indeed, each one has vied with the rest in executing his difficult and perilous task; a gallant emulation has pervaded every one, and general harmony, goodwill, and fellowship, have welcomed the rule of discipline. Nor should we disregard the noble exertions of Captain Penny, in his very interesting and laborious exploration, so well seconded as they were by his officers. Not only sledges, but boat work fell to their share; violent gales, heavy seas, and rapid tides, with snow and rain, it was their lot to encounter; and though they were not rewarded by finding Franklin, they have the glorious reflection of having assisted materially in the great work in hand. They, too, performed well their several tasks; they have established their claim on the notice of their country, and we trust will, at the fitting time, receive their reward; or, in the words of Captain Penny, that it will be 'remembered to their advantage'.

"We perceive by the daily prints that Captain Penny's ship has arrived. The account says, 'the *LADY FRANKLIN*, commanded by Captain Penny, arrived at *Woolwich* yesterday afternoon, and was brought up at moorings alongside the *SALLETTE* receiving ship, opposite the dockyard; and the *SOPHIA*, her sister vessel, is daily expected at that port. The *LADY FRANKLIN* is come home safe and sound, in excellent condition, and remarkably clean, and with as healthy and robust a crew as ever sailed in any region, and without a single complaint amongst the men on board; if it is excepted that they say they cannot now eat so much meat as they used to do of fat pork and other rich edibles, their appetites having greatly abated since they left the *Orkneys* for *Woolwich*. The Danish interpreter has returned with them, and appears to be a very decent and passably intelligent person, and expresses his belief that the discovery ships, *EREBUS* and *TERROR*, are still safe.'"

EXTRACT

From the United Service Gazette, September 13, 1851.

"We insert without any comment the very interesting despatches brought home by Captain Penny, and we only hope that the information which this gallant man has been able to impart to the Admiralty, *will induce their Lordships to listen to the suggestions which he has been enabled to make to them*, and which, from his experience as an Arctic voyager, must deserve some credit at their hands.

"He was busily engaged at the Admiralty yesterday, and it is believed he will be despatched again this year to prosecute his search of the *Wellington Channel*. Captain Austin's Expedition may be daily expected."

SUMMARY.

SIR JOHN ROSS'S EXPEDITION.

"The following notices of Sir John Ross's proceedings have reached us:—

"The *FELIX*, with Sir John Ross and Commander C. G. Phillips, with her decked boat in tow, left Ayr 23rd May, 1850.

"August 27th, arrived at *Beechey Island* with Captain Penny, and the American Expedition, and discovered that Franklin had passed the winter of 1845 and 1846 there.

"28th August, *RESOLUTE* and *PIONEER* joined company; detained here till September 5, when all the vessels proceeded, but the *FELIX* did not get across the *Wellington Channel* till the 9th September. Stayed a few hours at *Barlow Inlet*, and 11th September was finally stopped by fixed ice between *Griffith* and *Cornwallis* Islands. Penny's Expedition joined company, and 12th September the three vessels got into a bay thirteen miles west of *Cape Hotham*, where they passed the winter.

"About the middle of April, 1851, travelling parties set out, details of which will be found elsewhere. Captain Ommanney visited *Cape Walker*, and searched land as far as latitude 72° 44' N., longitude 102° 20' W. Lieutenant Osborn extended this line to latitude 72° 40', longitude 105° to 6. Lieutenant Aldrich along the south shore of *Bathurst Land* up to latitude 76° 11', longitude 106° 30'. Dr. Bradford, east coast *Melville Island*, to latitude 76° 15'. Lieutenant McClintock visited *Winter Harbour* in *Melville Island*, rounded *Cape Dundas* into *Siddon Gulf* as far as *Bushnan Cove*, returning across the land to *Winter Harbour*, and thence to his ship: he was absent eighty days, saw plenty of deer, musk oxen (four killed), and hares. Captain Penny's parties explored a large channel north of *Cornwallis* and *Bathurst* lands (which are united), saw land to the northward with three or four large openings, and was afloat in a boat from 17th June till late in July. A piece of elm picked up by him. Particulars of this exploration not made known at this date.

"Commander Phillips attempted to cross *Cornwallis Land*: absent thirty-one days, but had to return, having, as he supposes, got three-quarters across. No other traces of Franklin discovered. The American Expedition last seen 13th September 1850, homeward bound."

CAPTAIN PENNY'S DESPATCHES.

"Her Majesty's ship *LADY FRANKLIN*, *Assistance Harbour*,
Cornwallis Island, April 12, 1851.

"Sir,—I have the honour to inform you, for the information of my Lords Commissioners of the Admiralty, that after parting company with Her Majesty's ship *NORTH STAR*, on the 1st of August, I reached along the north shore of *Barrow's Strait* until Sunday, the 24th, keeping a strict look-out. Being then off *Beechey Island*, I spoke the American schooner *RESCUE*, and learned that Her Majesty's ship *ASSISTANCE* had found traces of the Franklin expedition in *Cape Riley*. The *ASSISTANCE* was then running to the westward, and, anxious to be possessed of every particular, followed her with the intention of going on board; but I had not that opportunity until two p.m., when both vessels were made fast to the land ice, two-thirds of the distance across *Wellington Channel*, the *ASSISTANCE* being about one-and-a-half miles to the westward of us. Finding that the traces were apparently those of a retreating party, I thought it my proper course to return to the east side of *Wellington Channel*, which I accordingly did. The succeeding morning I landed with a party, and examined the coast from ten miles to the northward of *Cape Spencer* to that promontory, and an encampment was found near the latter place, seemingly that of a hunting party about three years previous. Joining company with the *ADVANCE*, the *RESCUE*, and the *FELIX* schooners the following morning, we made fast in a bight under the north-west side of *Beechey Island*, and, having consulted with Captain De Haven and Sir J. Ross, it was agreed that the former should dispatch a party to continue the search northward, along the east coast of *Wellington Channel*, while I explored the coast to the eastward. Meantime, a party of all my officers, which had been dispatched in the direction of *Cassell's Tower*, discovered the quarter which had been occupied by the vessels of Sir John Franklin's expedition in the winter of 1845-6. Three graves were also found, the head-boards showing them to be those of three seamen who had died early in the spring of 1846; but notwithstanding a most careful search in every direction, no document could be found. The same evening, a boat-party was dispatched, under Captain Stewart, to explore *Radstock Bay* and its vicinity, but no further traces were found in that direction.

"The *RESOLUTE* and *PIONEER* came up and made fast on Wednesday morning, and an unfavourable condition of the ice detained us all till evening, when water being opened to the eastward, I stood a certain distance across *Wellington Channel* in the morning, and sent away a party under Mr. J. Stuart, to communicate with the *ASSISTANCE*. The same evening we were again in *Beechey Bay*, and the party returned the following forenoon, having accomplished upwards of forty miles.

"By them we were acquainted that the *ASSISTANCE* had found no traces in about thirty miles of coast examined by her to the north and south of *Barlow Inlet*.

"The state of the ice prevented the least motion being made with the ships until Thursday, the 5th of September, when we left *Beechey Bay*; but so little was the ice slackened off, that we were unable to reach the west side of the *Channel* before Sunday, the 8th.

"While lying under *Beechey Island*, arrangements were made with Sir

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John Ross to lay up the *MARY* yacht, and a quantity of provisions was contributed, as our share of the depôt there formed.

"On Sunday, the 8th, I landed with a party about twelve miles to the northward of *Barlow Inlet*, and a cairn and pole were erected in a conspicuous situation. *Wellington Channel* being blocked up with old land ice, no alternative was left but to proceed to the westward, with a view of reaching *Cape Walker*, or attempting some other passage between the islands of the *Parry Group*, or, failing either of these, *Melville Island*. Following out this course, we pushed on through the bay ice, which was now so strong as to retard us greatly; but notwithstanding that obstacle, we reached *Griffith Island* on Tuesday, the 10th of September; and having made fast there on account of the state of the ice, I had again a consultation with Captain Austin, with a view to acting in concert.

"The following morning, the more favourable appearance of the ice induced me to make an attempt to reach *Cape Walker*; but after proceeding twenty-five miles, the ice became packed, which, with a heavy fog, caused me to put about, and make for our former position. The hourly-increasing thickness of the bay ice, which had now become such an obstacle, that with a strong breeze the ship stayed with considerable difficulty, rendered it absolutely necessary that a place of safety should be obtained for the vessels, and I accordingly made for this harbour, a rough sketch of which I had previously obtained from the ASSISTANCE.

"We brought up at eleven, a.m., on Thursday, the 12th of September, and shortly afterwards the *FELIX*, Captain Sir J. Ross, came in and brought up; two boats were sent ashore and hauled up, to fall back upon should further progress be made; but being unable to get out by the 20th, so as to be usefully employed, preparations were commenced for wintering.

"With reference to the winter that we have spent, one fact will speak for itself, viz.,—that there has not been one single case of sickness in either the *LADY FRANKLIN* or *SOPHIA*; indeed, so completely were both the minds and bodies kept properly occupied and carefully attended to, that with the crews I have it would have been surprising to have seen sickness. While on this subject, I cannot but make mention in terms of praise of Messrs. Sutherland, Goodsir, and Stuart, their exertions alike to instruct and amuse the men, greatly contributing to the happy issue.

"Frequent communication has been held with Captain Austin's expedition, which has wintered in the strait between *Griffith* and *Cornwallis Islands*, and arrangements were made with reference to the different routes to be taken in the coming travelling. Pursuant to these, there are at present ready to start from the *LADY FRANKLIN* and *SOPHIA* two parties, of three sledges each, to explore *Wellington Channel* and the land which may be found at the head of that great inlet.

"Independent of the above, there are two dog sledges prepared for extended search in the same direction; one of these will be conducted by the interpreter, Mr. Petersen, of whom I would beg to make particular mention, trusting that his noble devotion in the cause of our countrymen may be remembered to his advantage.

"The day at present fixed for the start is Monday, 14th of April, should the weather continue favourable. Previous to starting, I have thought proper to make out this dispatch for their lordships' information.

"I have the honour to be, Sir,

"Your most obedient servant,

"William Penny.

"Commanding an Expedition in search of Her Majesty's ships *EREBUS* and *TERROR*.

"To the Secretary to the Admiralty, London."

"Her Majesty's ship *LADY FRANKLIN*, at sea,
"Sept. 8, 1851.

"Sir,—Resuming my report of proceedings from the date of my last dispatch, I have to inform you that on the 17th of April six sledges, with forty-one officers and men, started from the ships, under the command of Captain Stewart, of the *SOPHIA*, and I could not but be gratified at seeing what our small means had put in our power to do with these parties of men, alike able and willing. The sledges were variously officered by Captain Stewart, Messrs. Marshall, Reid, and J. Stuart, and Drs. Sutherland and Goodsir.

"The course intended to be pursued was to proceed so far together up the west side of *Wellington Channel*, and, after returning the depôt sledges, two parties to cross the east side of the *channel*, while the other two followed up the west coast to the head of the *channel*, the position of land then seen determining their future procedure.

"Each sledge was equipped for forty days, and the average weight per man was upwards of two hundred pounds. I started from the ship on the 18th, with the dog-sledges, accompanied by Mr. Petersen, and at noon, on the 13th, I joined the sledges. They had found the ice very heavy, in consequence of the recent snow and the high temperature, and their journey of the previous day had not exceeded six and a-half miles. The inefficient state of our cooking apparatus had already begun to cause much inconvenience.

"On the 19th the temperature fell, and a gale of wind faced us immediately on entering the channel, which continued, with only partial intermissions, till the 22nd. During all that time I was continually among them, and whatever doubts the want of experience of my young officers might have warranted my entertaining, they were all removed by witnessing the management of their men on this occasion. On the 21st, Mr. J. Stuart returned with the two depôt sledges and only one tent, in consequence of the extreme severity of the weather. I felt great anxiety for this party; however, in two marches they reached the ship, with only a short interval of rest. Meanwhile, the gale continued down the channel, with a temperature varying from 25° to 30°. This, and the want of numerous articles, such as a sufficient supply of fuel, &c., caused me to entertain a fear of failure, if these defects were not remedied in time. I accordingly consulted my officers on the subject, and in consequence of our unanimous opinion that a timely return was the most advisable step, I determined to deposit all the provisions, and the two best sledges, at this spot, returning with the other two to receive alterations. The distance to this spot was forty-two miles. The dog-sledges, on their return, accomplished the distance in one stage. The other four parties, after making the deposit, returned, reaching the bay at noon on the 26th, everyone in the best health, and not a single case of frost-bite; and I cannot but state my admiration of the constant contentment and steady and willing endurance of the officers and men of the parties under circumstances of no small hardship. From this date to the 5th of May everyone was busily engaged preparing more amply for what we had found to be necessary in our first journey. On the 6th, after a short prayer to the Almighty to enable us to fulfil our duty, the sledges again started, the crews of the two that had been left up channel being distributed among them. They were again in charge of Captain Stewart till such time as I should myself join them at the upper depôt, when I was to see each party take its separate route. At six o'clock, a.m., on the 9th of May, I started with Mr. Petersen and Thompson, one of the seamen, with two dog sledges, and at two o'clock, p.m., we overtook the parties, then camped at the further depôt. From *Point Separation*, 75° 5' N. lat., Captain Stewart, with his auxiliary, Dr. Sutherland, and Mr. J. Stuart, of the *LADY FRANKLIN*, left, proceeding along the coast to *Cape*

Hurd, examining the various beaches, &c., for further traces, as strong opinions were still entertained that more was to be found in that quarter.

"Mr. Goodsir, with Mr. Marshall as his auxiliary, had assigned to them to examine the west side, and to follow up after the dog sledges, receiving final instructions on reaching the head of the channel. Rapid journeys were made with the dogs to *Cape De Haven*, in N. lat. $75^{\circ} 22'$. Hence the land was seen to trend N.W. ten miles, terminating in a point, afterwards named *Point Decision*, which was reached at half-past ten, p.m., on the 12th of May. A hill of four hundred feet in height was ascended, and in consequence of the land running then continuously in a north-westerly direction, instructions were left to Mr. Goodsir to take this coast along to the westward, while I myself proceeded in a N.W. by N. direction towards land seen to the northward. At five, p.m., on the 14th, we encamped on the ice, having travelled twenty-five miles N.W. by N. from *Point Decision*. The following day, after travelling twenty miles from the encampment in a N.W. by N. direction, we landed at seven, p.m., on an island named *Baillie Hamilton Island*.

"Ascending a hill about five hundred feet high above the headland on which we landed, the ice to the westward, in the strait between *Cornwallis* and *Hamilton Islands*, was seen to be much decayed, and an island was seen to the westward, distant thirty-five or forty miles. As the decayed state of the ice prevented further progress to the westward from this point, and no trace being found, we proceeded round the island, first to the N.N.E., and afterwards, on rounding *Cape Scoresby*, in a N.N.E. direction. On the 16th we came upon what to all appearances was water; and on halting, on the 17th, at *Point Surprise*, we were astonished to open out another strait, in which was twenty-five miles of clear water; an island was seen bearing W. $\frac{1}{2}$ S., distant forty miles; and a headland, distant fifteen miles W. by N., the dark sky over this headland indicating the presence of water, to the extent perhaps of twenty miles, on the other side. This point was found to be in $76^{\circ} 2' N.$ lat., and $95^{\circ} 55' W.$ long. Further progress being prevented by water, and we being still without traces, and the dogs' provisions being exhausted, no other course remained than to return to the ships, which we reached, after rapid journeys, at midnight on the 20th of May.

"The carpenters and people on board were immediately set about preparing a boat to endeavour to reach the water scene.

"On the 29th of May, the second mate arrived, having left Mr. Goodsir in $75^{\circ} 36' N.$, and $96^{\circ} W.$ Water had been seen by them to the northward, from their furthest station. He made a very rapid return, having run in one day from twenty-five to thirty miles. Every one on board continued actively employed, preparing the boat, provisions, &c., and on the 4th of June it started with one auxiliary sledge and one dog's sledge; the whole party being in charge of Mr. Manson.

"On the 6th June, Mr. John Stuart returned with his party from *Cape Hurd*, after an absence of thirty-one days, but without having found any traces either indicative of the course pursued by Her Majesty's ships *EREBUS* and *TERROR*, or of any searching party having subsequently passed along the coast.

"After thirty-six hours' rest, Mr. Stuart again started to join Mr. Manson, having equipped his sledge for a twenty days' journey. He overtook the boat on the morning of the 8th of June, then one mile to the westward of *Cape Hotham*. The same day a dog sledge, from Mr. Manson, arrived at the ship, stating that the sledge on which the boat was placed after trial had been found unfit for the purpose. The armourer, who was returned with the dog sledge, was immediately set about preparing a longer sledge, but having no carpenter on board, the wood-work was finished by Sir John Ross's carpenter. On the 11th, at four, a.m., I joined the boat with the two dogs' sledges, and all hands were immediately set about fitting and lashing

the new sledge, and arranging the packages of the party between the two long sledges and the two dogs' sledges. On the 12th, Mr. Manson returned, no one being left in the ship but the clerk in charge.

"The improvement in the boats' sledges was so remarkable, and the ice also so much better, that a distance of one hundred and five miles was accomplished in seven marches. The boat being then launched into the water and laden, the fatigue party returned, and reached the ship on the 25th of June, all in good health, the dogs dragging the light sledges the whole way.

"On our journey out, we met Dr. Sutherland at *Depôt Point* returning, after an absence of thirty-eight days. He reported having left Captain Stewart in $76^{\circ} 20' N.$, in the opening of *Wellington Channel*, but without having yet fallen in with any traces. When off *Point Griffin*, on the 14th, Messrs. Goodsir and Marshall were fallen in with, having examined the northern shores of *Cornwallis* and *Bathurst Land*, as far as $99^{\circ} W.$, but still without having fallen in with any traces. They were obliged to return in consequence of the water.

"Resuming the boat journey, after separating from the fatigue sledges on the 17th of June, we proceeded about ten miles to the westward, when we were obliged to take shelter in an adjacent bay, in consequence of a head sea and strong easterly gale. From this date until the 20th of July, three hundred and ten miles of coast were examined by the boat under very disadvantageous circumstances, arising from constant unfavourable winds and rapid tides. Our provisions being then within eight days of being consumed, and our distance from the ship such that prudence would not warrant further perseverance with this supply, we commenced our return, and with a strong north-west wind, succeeded in reaching *Abandon Bay* after fifteen and a half hours. The ice being so decayed as to preclude the launching of even an empty boat, we were compelled to haul the boat ashore and abandon her, taking with us four days' provisions. The weather during our return was boisterous in the extreme, with continued rain, which made the streams it was necessary to ford very rapid. The constant wet caused the greatest discomfort, but from none of my men did I once hear a complaint. In 75° north latitude, we found a boat, which Captain Stewart had wisely sent out in search of such a contingency as had occurred; but the ice having set into the mouth of *Wellington Channel*, which had up to this time been open, we were unable to fetch her down further than *Barlow Inlet*. Thence we walked to the ships, which we reached at ten p.m. on the 25th of July.

"Captain Stewart had returned on the 21st of June, having reached *Cape Becher*, in $76^{\circ} 20'$ north latitude, and 27° west longitude. We here again started on the 1st of July, and carried up a depôt for my return to *Cape De Haven*, returning from this journey on the 17th of July. For particulars during the different searches, I would refer you to the accompanying reports.

"On my return, I was equally surprised to hear that *Barrow Strait* had been open as far as could be seen since the 2nd of July—an occurrence which was so far to be expected, as the *Strait* was seen to be in motion till the 11th of March. The land ice had also come out of *Wellington Channel* as far up as *Point Separation*, probably about the 5th of July; and on the 27th of July, when our travelling operations concluded, the fast edge in the channel continued in the same position.

"The ship continued icebound till the 10th of August; but had our parties returned in sufficient time to refit and be ready to cut out from the date of water making, we would not have been at liberty on the 15th of July.

"On the 11th of August, Captain Austin's ships entered our harbour in their progress to the eastward. His parties had penetrated so far as ships could hope to go, yet, like our own, unsuccessful in finding the least trace of the missing expedition. In fact, none had been found such as would warrant the risk of a second winter, and, my orders being such as left no alternative, I determined on immediately returning to England, if no instruc-

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tions to the contrary should be met with. In proceeding down the country, we landed at *Cape Hay* and *Button Point*, in *Pond Bay*, positions considered the most probable for dispatches being sent on by the whale ships. Finding none, we continued our course down along the land, crossing, in 70° north latitude, through a body of a hundred and forty miles of ice. We made repeated endeavours to reach *Sievely*, on the island of *Disco*, to ascertain if any dispatches had been left there for our guidance; but thick weather and a strong northerly wind obliged us to haul off, after having made a narrow escape from a reef lying close in shore. We parted from the *SOPHIA* about twenty miles off the land, expecting to rejoin her after having communicated with the Danish settlement; but the thick weather and strong gale continuing for twenty-four hours, we separated from her, and have not since seen her. Captain Stewart's instructions, in case of such an event, were to make the best of his way to *Woolwich*, having it in his power to take either the *English Channel* or the *Pentland Frith* as his route, according as the wind might lead.

"In speaking of the services of the various officers under De Haven, I would mention my second in command as an able and energetic coadjutor, both on board ship and in conducting the search along the east coast of *Wellington Channel* and the south shores of *Albert Land*; and his foresight in laying out a depôt and a boat for the boat party greatly facilitated our safe return. Dr. Sutherland, of the *SOPHIA*, as his auxiliary in travelling, proved himself a most indefatigable officer; and his attention, while on board, to natural history and meteorology, will no doubt afford many useful facts. Of Mr. D. Morrison, the chief mate of the *SOPHIA*, an old and experienced whaling master, I cannot speak too highly. He had charge of the vessel during the absence of myself and Captain Stewart, and throughout the winter he paid the greatest attention to tidal and barometrical register; and his services in conducting the boat to *Cape Hotham*, under peculiarly disadvantageous circumstances, were beyond all praise. Mr. James Reid, the second mate of the *SOPHIA*, a son of the ice-master of the *EREBUS*, accompanied Captain Stewart in the first journey as an auxiliary, and afterwards proceeded with him to his furthest. Of Messrs. Marshall and Lieper, the chief and second mates of the *LADY FRANKLIN*, I would make mention as experienced and skilful ice officers; and the exertions of the one in accompanying Mr. Goodsir in the whole extent of his journey, and the other, my second in the boat, were such as could not but afford me the greatest satisfaction. The whole of the duties of refitting the ship during my absence fell upon Mr. Marshall, and were accomplished in a time remarkably short, considering the few hands on board. Of Mr. John Stuart, the youngest officer under my command, I cannot speak too highly. Finding that there were no duties as an assistant surgeon, he acted as third mate, and his exertions in preparing the travelling equipment, his surveys of various bays during his travels, and his assistance in preparing charts, etc., have proved of the greatest use; and for his proceedings during the search of the beaches, &c., between *Cape Grinnell* and *Cape Hurd*, I would refer you to his journal. He afterwards started as an auxiliary to the boat party, with an interval of only thirty-six hours, and was subsequently employed in numerous short journeys, conducting boats, &c.

"Mr. Goodsir, in his western search, discharged alike his duty to this expedition and his missing brother.

"Mr. Petersen, the interpreter, in conducting the dog sledges, and in affording much useful information with reference to travelling, as well as his personal exertion in the same, to the extent even of injuring his health, has afforded me the greatest satisfaction; and of his services as interpreter on a former occasion I have made mention in a previous dispatch.

"Of the seamen of both vessels placed under my command I cannot speak too highly; for neither in winter quarters, nor while enduring the privations

and fatigues of travelling, did ever one complaint or grumble reach my ears. Of their unwearied exertions, a schedule is laid before you; and if success has not attended their labours, they have not the less performed their duties.

"I have, etc.,

"William Penny.

"Commanding the Expedition.

"The Secretary of the Admiralty."

CAPTAIN AUSTIN'S DESPATCHES.

"REPORT OF PROCEEDINGS.

"Her Majesty's ship *RESOLUTE*, off the winter quarters of Captain Penny's Expedition, between *Capes Martyr* and *Hotham*, Aug. 12, (?) 1851.

"SIR,—In order that the Lords Commissioners of the Admiralty may learn by the first opportunity the proceedings of the expedition entrusted to my charge, I consider it advisable that a brief account (amended since the return of Captain Penny) should be placed on board the *LADY FRANKLIN*, my brief report of the 14th instant having been transferred to the *FELIX*, in consequence of the attempt to send a boat to *Pond Bay* to communicate with the whaler being relinquished.

"2. Captain Ommanney having examined *Wolstenholme Sound*, which proved to have been the winter quarters of the *NORTH STAR*, and completed the search of the north shore of *Lancaster Sound* and *Barrow Strait*, from *Cape Warrender* to *Cape Fellfoot*, looked into *Port Leopold*, and then proceeded in further execution of his orders, the *INTREPID* having, in the meantime, examined *Maxwell Bay* and *Cape Hurd*, finding at the latter place a record from the *INVESTIGATOR*.

"3. Captain Ommanney, in the *INTREPID*, reached *Cape Riley* and *Beechey Island* on the night of the 23rd of August, and at both found positive traces of the missing expedition.

"4. On the 24th, Captain Ommanney was joined by the United States' schooner *RESCUE*, and in the latter part of that day he dispatched the *INTREPID* to search the shore to the northward; but she was stopped by the fixed ice about four miles beyond *Point Innes*.

"5. On the 25th, a lead opened towards *Cape Hotham*; Captain Ommanney, hoping to find a record here, dispatched the *INTREPID* to take advantage of it, following in the *ASSISTANCE*; Captain Penny, who had now arrived and communicated, remaining to search the bay between *Cape Riley* and *Beechey Island*.

"6. The *RESOLUTE*, having in her search been detained by bad weather, did not reach *Cape Riley* and *Beechey Island* until early on the morning of the 28th. She found between the latter and *Cape Spencer* the *FELIX*, Sir John Ross, the two brigs of Captain Penny, and the *RESCUE*, Lieutenant De Haven, and saw from the crow's nest the *ASSISTANCE* and *INTREPID* on the opposite shore, near *Barlow Inlet*; the other United States' schooner, *ADVANCE*, was beset a few miles to the northward, with a searching party to *Cape Bowden*, where a bottle, scraps of newspaper, shot, and other miscellaneous fragments were found, conveying the impression that it had been the resting-place of a shooting or other small party.

"7. In rounding *Beechey Island*, we were hampered by the closing of the ice, which drove the *PIONEER* into shoal water, where she grounded, and was afterwards hove off without having sustained any damage.

"8. Previous to the arrival of the *RESOLUTE*, Captain Penny had found on *Beechey Island* three graves, and various other conclusive evidence; which, the moment I saw them, assured me that the bay between *Cape Riley* and *Beechey Island* had been the winter quarters of the expedition under Sir John Franklin, in the season 1845-46, and that there was circumstantial evidence sufficient to prove that its departure was somewhat sudden; but

whether at an early or late period of the season was very difficult to determine.

"9. The absolute necessity for the *RESOLUTE* being held ready to push across the *strait* at the earliest moment to communicate with Captain Ommanney, to determine further movements, and get to the westward, prevented travelling operations, but the immediate neighbourhood of *Cape Riley*, *Beechey Island*, and the coast of *Wellington Strait*, to near *Cape Bowden*, were satisfactorily searched without any record whatever being found.

"10. On the morning of the 28th, the ice eased off sufficiently to enable Lieut. De Haven to rejoin his consort round *Cape Spencer*. On the afternoon of the 4th of September, upon a southerly movement of the ice, the *ASSISTANCE* rounded *Cape Hotham*, and the United States Expedition reached to near *Barlow Inlet*; and on the morning of the 5th, another movement enabled the *RESOLUTE* and *PIONEER* to reach the western shore, but not in time to obtain security in *Barlow Inlet*.

"11. We continued beset until the evening of the 7th, when the ice gave way to the northward, and carried us, in a critical position, out of the *strait* to the south-east of *Cape Hotham*. This movement enabled Captain Penny and Sir John Ross to cross the *strait*.

"12. Early on the morning of the 9th, another change occurred, when we succeeded in relieving ourselves from the ice, and (with the brigs and schooners) gained the water between the pack to the southward and *Cornwallis Island*; then pushed onwards with raised hopes to the westward, steering for the southern extremity of *Griffith Island*, and sighting in the evening the *ASSISTANCE* and tender in that direction.

"13. On the morning of the 10th, we reached an extensive floe, extending from the south-west end of *Griffith Island* to the southward, as far as the eye could reach, to which the *ASSISTANCE* and tender were secured. We joined company, as did the brigs, and in the evening the United States expedition. Captain Ommanney informed me that he had searched by parties on foot (unhappily without finding any trace) the shores of *Cornwallis Island* from six miles above *Barlow Inlet* to *Cape Martyr*; had found two bays on the south side, eligible for winter security, and had deposited on *Cape Hotham* a depôt of twenty days' provisions for ninety men, as also a small depôt on *Griffith Island*, since taken up.

"14. Early in the morning of the 11th, Captain Ommanney, in the *INTREPID*, was dispatched to the south-westward, to ascertain the state of the ice. Captain Penny also proceeded. The former returned in the evening, having only been able to proceed in a southward-and-westward direction about twenty-five miles. Of the situation of the brigs I was somewhat apprehensive, confident that, from the severe weather, they were to the southward-and-eastward of their former position.

"15. Having now seen the uncertainty of the navigation to the westward, and the necessity for measures of precaution and prudence, with a view to subsequent operations, I determined upon placing the *ASSISTANCE* and tender in winter quarters in a bay, midway between Capes *Hotham* and *Martyr*, and addressed a letter to the two leaders of the expeditions, apprising them thereof, and proposing that the whole force might be concentrated, and arrangements made for each taking such portion of the search as, under the circumstances, might best insure the accomplishment of the object of our mission.

"16. On the morning of the 13th, the weather having somewhat cleared, with the temperature down to near zero (plus 3°), we cast off. After much labour and difficulty cleared the bay and stream ice, and reached open water east of *Griffith Island*, when the United States expedition were seen to communicate with each other, hoist their colours, and stand to the eastward; and it was not until some short time after that I recollected Lieutenant De Haven had, in reply, apprised me of the probability of his return to America

this year, but the circumstances in which we were placed wholly prevented our bearing up for communication. The same evening we made fast to the fixed ice between *Cape Martyr* and *Griffith Island*, as the only hope of finding security and gaining westing.

"17. On the morning of the 14th, the *PIONEER* proceeded to examine the ice to the southward, and returned in the evening, reporting no change; and early on the morning of the 16th, the *ASSISTANCE* and tender left for their winter quarters, the *RESOLUTE* and tender remaining at the edge of the ice, in the hope of obtaining at least an amount of westing that would be of good service when carrying out spring operations.

"18. The bay ice proving very strong, the *ASSISTANCE* and tender got closely beset, and drifted for some time helplessly towards the shore, upon which (as soon as the vessels could be extricated) Captain Ommanney deemed it advisable to return, rejoining the same evening.

"19. We thus remained in the hope that the *RESOLUTE* and tender might be able to advance until the 24th, when, from the state of the ice and the low temperature (plus $13\frac{1}{2}^{\circ}$) we were, after mature consideration, reluctantly compelled to give up all idea of proceeding further, and to consider it imperative to look forthwith to the security of the expedition. The bay ice having this day slightly eased off a short distance eastern, we commenced to cut through the newly-formed pressed-up ice, between three hundred and four hundred yards in extent, and from two to five feet in thickness, between us and the lane of water, with a view of reaching the small bay a little to the eastward of *Cape Martyr*: but the new ice again making very fast, we were obliged to relinquish the effort on the evening of the 25th.

"20. Although it was now late to hope for much by travelling parties, yet, as the ships were fixed, I determined to dispatch a limited number to do all that could be accomplished before the season finally closed; as pioneers to the routes of the ensuing spring parties, and to gain experience; there accordingly started on the 2d of October a party of six men, under the command of Lieutenant Aldrich, with one runner sledge and thirteen days' provisions (assisted by one officer, six men, and one flat sledge, with three days' provisions), for *Somerville* and *Lowther Islands* on the *Cape Walker* route; a double party of twelve men, under the command of Lieutenant M'Clintock and Mr. Bradford, surgeon, with four flat sledges, fourteen days' provisions, and a depôt, for the *Melville Island* route; a small party, under the command of Lieutenant Meham, towards *Cape Hotham*, to ascertain if any of the expeditions late in company were in sight from that position; and (afterwards) a small party, under the command of Lieutenant Osborn, to search the bay between *Cape Martyr* and the cape north-west of our position; but the weather becoming severe, with a considerable fall of temperature (49° below the freezing point) they shortly returned, having only succeeded in placing the depôts—Lieutenant Aldrich on *Somerville Island*, and Lieutenant M'Clintock on *Cornwallis Island*, to the westward about twenty-five miles, but without discovering any traces. Lieutenant Meham found in the bay intended for the winter quarters of the *ASSISTANCE* and tender, the expeditions of Sir John Ross and Captain Penny.

"21. On the afternoon of the 17th, Captain Penny arrived in his dog sledge, when the spring operations were determined upon—Captain Penny cheerfully undertaking the complete search of *Wellington Strait*. Thus ended the season of 1850.

"22. The expedition was now prepared for the winter, and every means taken to pass as cheerfully and healthfully as possible this dreary season; exercise in the open air, instruction and amusement were resorted to, which, with the most perfect unanimity and a fair portion of conviviality (under the blessing of Providence), carried us through the monotony and privations of an Arctic winter in good health and spirits; for which much credit and my best thanks are due to Captain Ommanney, the officers, and all composing the expedition.

" 23. On the 18th of February, 1851, a communication was opened (by a small party from this expedition) with our neighbours to the eastward (temperature $69\frac{1}{2}^{\circ}$ below the freezing point), and shortly after an interchange was made with Captain Penny, of the detail of equipment for travelling parties determined on by each.

" 24. By the 10th of March, every arrangement had been made and generally promulgated for the departure of the spring searching parties as early as practicable after the first week in April. All appeared satisfied with the positions assigned to them, and became alike animated in the great and humane cause. With regard to myself, it appeared imperative that I should remain with the ships, and leave to those around me the satisfaction and honour of search and discovery—from their ages well adapting them for such service, the confidence I felt in their talent and experience being fully equal to direct the energies and command the powers of the parties under them, and their determination to carry out the tasks they were appointed to perform. I must, however, say, that—if such a feeling could exist on a matter of duty—I did not, without the sacrifice of some personal ambition, refrain from participating in this great work of humanity.

" 25. From this period all joined heart and hand in putting forward every effort in the general preparation. Walking excursions for four hours a day, when weather permitted (temperature ranging from 10° to 43° minus), and sledge dragging with the actual weights, were measures of training.

" 26. By the 28th of March each individual was ready, and the equipment of the sledges generally complete. The best feeling and highest spirits prevailed throughout the expedition, and all looked forward most anxiously for the arrival of the time when weather and temperature would permit their departure.

" 27. The weather being more promising on the 4th of April (temperature 38° below freezing point), Mr. M'Dougal, second master, with one officer and six men, one runner sledge, and twenty days' provisions, left to examine the depôts laid out in October last, and to search and examine, with the view to a subsequent survey, the unexplored part between *Cornwallis* and *Bathurst Islands*.

" 28. The temperature having risen on the 5th of April, the final departure of the parties was determined upon for the 9th. On the 7th (temperature 44° below the freezing point), the sledges were packed and made ready for that purpose, but fresh winds frustrated the arrangements.

" 29. The weather becoming more favourable on the morning of the 12th (temperature 50° below freezing point), the whole of the sledges, fourteen in number, manned by one hundred and four officers and men, and provisioned, some for forty, and others for forty-two days, with an average dragging weight of two hundred and five pounds per man, were conducted, under the command of Captain Ommanney, to an advanced position on the ice off the north-west end of *Griffith Island*, where tents were pitched, luncheon cooked, and all closely inspected by myself; the highly satisfactory result gave me great confidence and hope. All then retired to pass the next day (Sunday) in quiet reflection and prayer.

" 30. A moderate gale from the south-east, with heavy drift, prevented their departure on the 14th, as intended.

" 31. (Temperature 14° below freezing point.) On the evening of the 15th of April, the wind having fallen, and the temperature having risen to plus 18° , all proceeded to the sledges. On arrival, a short period was devoted to refreshment, after which all joined in offering up a prayer for protection and guidance, then started, with, perhaps, as much determination and enthusiasm as ever existed, with the certainty of having to undergo great labour, fatigue, and privation.

" 32. On the 24th, another party of one officer and six men left to search *Lowther*, *Davey*, and *Gurrett Islands*, and examine the state of the ice to the

westward. Between this and the beginning of May the temperature fell considerably (to minus 37°), accompanied by strong winds.

"33. The whole of the limited parties returned at periods between the 27th of April and the 7th of May, unhappily without any traces. They brought in casualties of men from frost bite to the number of eighteen, one of which, it is my painful duty to relate, ended fatally. George S. Malcolm, captain of the hold of the *RESOLUTE*, a native of Dundee, whose death was attributed to exhaustion and frost-bite, brought on while labouring as captain of the sledge *Excellent*, virtually, it may be said, died at his post. He was a most respected petty officer; his remains are at rest on the north-east shore of *Griffith Island*.

"34. During this interval, four sledges, manned with twenty-seven officers and men, were dispatched with refreshments for the extended parties in their return, and to assist them if necessary, as also to make observations, fix positions, deposit records, etc.

"35. On the 23rd of May, Captain Penny reached the *RESOLUTE*, and made known to me that he had discovered a large space of water up *Wellington Strait*, commencing about seventy miles N.W. by N. of *Cape Hotham*. I much regretted that our remaining strength did not admit of my placing at his disposal sufficient aid to convey a boat, that he might ascertain its nature and extent.

"36. The extended parties returned—unhappily without any trace whatever—between the 28th of May and the 4th of July, in safety and good health, but requiring short periods of rest and comfort to remove the effects of privation and fatigue. They were out respectively forty-four, fifty-eight, sixty, sixty-two, and (the *Melville Island* parties) eighty days, some portions of periods they were (from heavy drift) detained in their tents, with the temperature ranging as much as 60° below the freezing point.

"37. The details connected with these operations I must defer for a future occasion, the following being the general results, viz.:—

ALONG SOUTH SHORE.

Name of Party.	Officer in Command.		No. of Crew.	Name of Sledge.	Days out.	Miles travelled.	Miles of coast searched.		Extreme point reached.	
	Name.	Rank.					New.	Old.	Lat.	Long.
Extended . . .	Mr. Erasmus Ommanney	Captain . . .	6	<i>Reliance</i> . . .	60	480	205	—	72°44'	100°42'
Extended . . .	Mr. Sherard Osborn . . .	Lieutenant	7	<i>True Blue</i> . . .	58	506	70	10	72°18'	108°25'
Extended . . .	Mr. W. H. Browne . . .	Lieutenant	6	<i>Enterprise</i> . . .	44	375	150	—	72°49'	96°40'
Limited . . .	Mr. George F. Meham . . .	Lieutenant	6	<i>Succour</i> . . .	39	236	80	—	—	—
Limited . . .	Mr. Vesey Hamilton . . .	Mate . . .	7	<i>Adventure</i> . . .	28	198	—	23	—	—
Limited . . .	Mr. Charles Ede . . .	Assist. Surg.	6	<i>Inflexible</i> . . .	20	175	—	—	—	—
Auxiliary . . .	Mr. Frederick J. Krabbé	Secd. Master	7	<i>Success</i> . . .	13	116	—	—	—	—
Reserve and Hydrographical . . .	Mr. George F. Meham . . .	Lieutenant	6	<i>Russell</i> . . .	23	238	—	75	—	—
	Mr. Frederick J. Krabbé	Secd. Master	6	<i>Edward Riddle</i> . . .	18	110	—	—	—	—

ALONG NORTH SHORE.

Extended . . .	Mr. R. D. Aldrich . . .	Lieutenant	7	<i>Lady Franklin</i> . . .	62	550	70	75	76°16'	104°30'
Extended . . .	Mr. F. L. McClinton . . .	Lieutenant	6	<i>Perseverance</i> . . .	80	760	40	215	74°38'	104°20'
Extended . . .	Mr. A. R. Bradford . . .	Surgeon . . .	6	<i>Resolute</i> . . .	80	669	135	80	76°23'	108°15'
Limited . . .	Mr. R. R. Pearse . . .	Mate . . .	7	<i>Hotspur</i> . . .	24	208	—	—	—	—
Limited . . .	Mr. Walter W. May . . .	Mate . . .	6	<i>Excellent</i> . . .	34	371	—	—	—	—
Limited . . .	Mr. W. B. Shellabear . . .	Secd. Master	6	<i>Dasher</i> . . .	24	245	—	—	—	—
Auxiliary . . .	Mr. John P. Cheyne . . .	Mate . . .	7	<i>Parry</i> . . .	12	136	—	—	—	—
	Mr. R. C. Allen . . .	Master . . .	7	<i>Grinnell</i> . . .	18	137	—	25	—	—
Reserve and Hydrographical . . .	Mr. R. C. Allen . . .	Master . . .	6	<i>Raper</i> . . .	7	44	—	—	—	—
	Mr. Walter W. May . . .	Mate . . .	5	— . . .	6	45	—	—	—	—
	Mr. George F. M'Dougall	Secd. Master	7	<i>Endeavour</i> . . .	18	140	95	20	—	—
	Mr. George F. M'Dougall	Secd. Master	6	<i>Beaufort</i> . . .	18	198	—	—	—	—

"38. The extent of coast searched will be seen more readily in the accompanying outline of a chart.

"39. Although all have experienced in the performance of this extensive undertaking considerable privation, labour, and suffering, and been animated with corresponding ardour in the great cause of humanity (which I earnestly

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CAPTAIN AUSTIN'S SECOND DESPATCH.

The following is extracted from Captain Austin's report of his further proceedings:—

"SIR,—In continuation of the report of the 12th of August last, transmitted by Captain Penny, I have now the honour to acquaint you, for the information of the Lords Commissioners of the Admiralty, that being off *Cape Warrender* on the evening of the 14th, in clear water, and under favourable circumstances, I attached to the *INTREPID*, Lieutenant Elliott, and Mr. Hamilton, mate; and to the *PIONEER*, Mr. McDougall, Second master, for hydrographical purposes, as also Mr. May, mate, in addition to the latter vessel; so that in the event of opportunity offering, the acquirements of those officers might be brought to good account. This gave to each vessel six additional men. Directed Captain Ommanney to erect a cairn and beacon, and deposit a record on *Cape Warrender*, and conduct the ships to the east shore of *Baffin's Bay*, and rendezvous between *Wolstenholme Sound* and *Cape York*; then, placing myself on board the *PIONEER*, proceeded at seven o'clock, p.m., with both steam tenders, along the west shore of *Baffin's Bay*; rounded *Cape Horsburgh* on the 15th; advanced along the coast to the northward about thirty miles, and then proceeded up by the southern shore of an extensive sound in the north-west direction, about forty-five miles. Here our progress was arrested by a fixed barrier of ice, that was subsequently found to extend from shore to shore, a distance of twenty-five miles. The vessels then stood along the edge of the ice to the north shore, when, proving it impracticable to prosecute further, a cairn and beacon were erected, and record deposited, upon a remarkable conical island: after which, we returned by the north shore out of the sound, having closely examined both sides without discovering traces of the missing expedition.

"The mouth of this sound is about sixty miles broad, with an island at its entrance, twenty miles in length, of which *Cape Leopold* is a part. During the clearest period we had here, when distant objects were very distinct, there was every appearance of a well-defined outline of land stretching across, and terminating it to the westward; and although I am impressed that there is no outlet in that direction, yet by no means assert such to be the case.

"There is every reason to consider this the *Jones's Sound* of *Baffin*, although its northern shore is situated about ten miles to the southward of that upon the chart.

"The attempt was then made to get to the northward, along the western shore of *Baffin's Bay*, to satisfactorily determine this question, but the ice rendered it impracticable; for by this time it had set home upon the coast, and blocked up both entrances to the *Sound*. We therefore directed our course, with considerable difficulty, through a drifting pack, towards the east shore, in the hope of being able to get to the northward and westward on that side, but were arrested ten miles to the northward of *Wolstenholme Sound* on the 20th, and detained and beset in that locality until the 28th, during two days of which, with spring tides and a heavy gale from the southward, our position was both critical and perilous. Upon one occasion, the *INTREPID* was driven upon the tongue of a berg, while her rudder was carried away, the frame of her screw broken, and two of her boats run over by a floe, the vessel herself remaining for about twenty hours in great peril, during a part of which her stern was raised to a very considerable extent, with the ice piling up forward to her gunwale, and all but falling on her deck, rendering it doubtful whether it would not become imperative to abandon her; but, happily, the wind fell, the ice ceased, and she became relieved in a most remarkable manner, apparently without having sustained any vital injury.

"Being unable to join the INTREPID, and the ice easing to the northward, the PIONEER proceeded in that direction until reaching nearly opposite *Cape Parry*, the southern entrance of *Whale Sound*, where she was again arrested by the ice in close pack, and made fast, in the hope of being able to examine that *Sound*, which is of limited extent (from eight to ten miles broad at its entrance), takes a north-easterly direction, and was filled with ice. After remaining a few hours, the ice began to close from the southward, rendering it necessary to forthwith retrace our steps, to avoid being beset; and we proceeded in the direction of the INTREPID.

"Having now, after full consideration, seen the impracticability of prosecuting further to the northward or westward in *Baffin's Bay* without risking detention for another winter, and the uncertainty of even then being able to do so, and considering that *Baffin's Bay* had been examined as far as the supposed *Jones's Sound* on its west side, and *Whale Sound* on the east, without any trace of the missing expedition; in addition to which, looking to the late period of the navigable season, I deemed it my duty to proceed at once to rejoin the ships and return to England, in accordance with the spirit of my instructions. We were, however, impeded a few miles to the northward of *Wolstenholme Island*, by a close and heavy pack to the southward until the 1st instant, when a slight easing of the ice took place, enabling us, after considerable difficulty and doubt, to rejoin the ships—the PIONEER on the morning of the 2nd, and the INTREPID, not being able to take the same lead, on the 6th.

"It is here necessary to notice that, had it not been for the capability of the screw propeller, most remarkable under such circumstances, I do not consider that either the passage across *Baffin's Bay*, or that to rejoin the ships, could have been accomplished in the manner or time they were.

"During the detention off *Wolstenholme Sound*, on the night of the 28th, the vessels were visited by a party of five Esquimaux, with dog-sledges. The confidence with which these harmless people approached the vessels, and their general manners, indicated their having visited the NORTH STAR, or some other vessel; and their state of health and appearance altogether betokened contentment and comparative comfort.

"On my return to the ships, I learnt from Captain Ommanney that, in crossing *Baffin's Bay*, they had been hampered considerably by the ice, and were compelled to pass to the northward of the *Cary Islands*.

"On the evening of the 6th of September, the expedition proceeded to make the best of its way out of *Baffin's Bay* and *Davis's Strait*; being much favoured by fair winds and open water, *Cape Farewell* was passed on the 16th, since which we have been followed by fresh gales and a high sea until abreast of *Aberdeen*, on the evening of the 26th.

"In concluding this report, I feel it to be due to express my sense of the ready and zealous co-operation I have received from Captain Ommanney, and of the efficient state in which the ship under his command has been at all times held; to the officers in command of the steam tenders; to the executive officers of the expedition, and to the heads of the respective branches, my best thanks are due; and I must not omit to notice the talented assistance I have had in the navigation of the expedition from Mr. Allen, master of the RESOLUTE. Of all in their respective stations (not forgetting the admirable conduct and spirited exertions of the crews) I cannot speak too highly; and hope, should their lordships be pleased to think favourably of the labours of the expedition entrusted to my charge, that they may be further induced to reward individual merit."

CORRESPONDENCE BETWEEN CAPTAINS AUSTIN AND PENNY.

"Her Majesty's ship *RESOLUTE*, off the Winter Quarters of Captain Penny's Expedition, August 11, 1851.

"Sir,—Having this day most unexpectedly reached your winter quarters, and also having had the satisfaction of a personal communication with you, I now beg leave to acquaint you that, having maturely considered the directions and extent of the search (without success) that has been made by the expedition under my charge, and weighed the opinions of the officers when at their extremes, I have arrived at the conclusion that the expedition under Sir John Franklin did not prosecute the object of its mission to the southward and westward of *Wellington Strait*.

"Under these circumstances, I now await your reply to my letter transmitted herewith, in order that I may make known to you at the earliest moment the plans for the future movements of this expedition.

"I have, &c.,

"Horatio T. Austin, Captain, &c.

"Captain William Penny, Her Majesty's brig *LADY FRANKLIN*, and in charge of an expedition searching for the expedition under Sir John Franklin."

"Her Majesty's ship *RESOLUTE*, off the Winter Quarters of Captain Penny's Expedition, August 11.

"Sir,—Having this day most unexpectedly reached your winter quarters, and also having had the satisfaction of a personal communication with you, I feel it incumbent (previous to making known to you my determination as to the further movements of the expedition under my orders) to request that you will be pleased to acquaint me, whether you consider that the search of the *Wellington Strait*, made by the expedition under your charge, is so far satisfactory as to render a further prosecution in that direction, if practicable, unnecessary.

"I have, &c.,

"Horatio T. Austin, Captain, &c.

"Captain William Penny, Her Majesty's brig *LADY FRANKLIN*, and in charge of an expedition searching for the expedition under Sir John Franklin."

"Assistance Bay, August 11.

"Sir,—Your question is easily answered. My opinion is, *Wellington Channel* requires no further search; all has been done in the power of man to accomplish, and no trace can be found. What else can be done?

"I have the honour to be, &c.,

"William Penny.

"Captain H. T. Austin, C.B., of Her Majesty's expedition in search of Sir John Franklin."

"Her Majesty's ship *RESOLUTE*, off the Winter Quarters of Captain Penny's Expedition, August 12, 1851.

"Sir,—I beg leave to acknowledge the receipt of your letter making known to me the result of the search of *Wellington Strait* by the expedition under your charge.

"I have now to inform you, that I do not consider it necessary to prosecute (even if practicable) a further search in that direction with the expedition under my orders.

"It is now my intention to proceed to attempt the search of *Jones's Sound*.

"I have, &c.,

"Horatio T. Austin, Captain, &c.

"Captain William Penny, Her Majesty's brig *LADY FRANKLIN*, and in charge of an expedition searching for the expedition under Sir John Franklin."

UNITED STATES' EXPEDITION.

The United States' searching vessel ADVANCE arrived at *New York* from the Arctic regions on the 30th ult. She had parted with the RESCUE in a gale of wind. The following appears on the subject in a *New York* paper:—

"It will be remembered that the latest previous intelligence from the RESCUE and the ADVANCE was to September 1850, received through the English papers. On that day they parted company with the English squadron, as mentioned in the despatches of Captain Penny. The same night they were frozen in at *Wellington Channel*. From that point commenced their northern drift, and they were carried up the Channel to latitude 75° 25', the greatest northing ever attained in that meridian. During this time the violence of the eruptions of the ice was so great that they could not keep any fires regularly on account of the motion of the vessel. From that latitude they commenced drifting again to the south, and in November 1850 entered *Lancaster Sound*. The mercury in the thermometer fell below zero, the bedding froze in every apartment, and the coffee and soup became congealed as soon as taken off the fire. The principal eruptions in the ice occurred on the 11th November and 8th December, 1850, and 13th January 1851, on which latter day the expedition entered *Baffin's Bay*. During the continuance of the vessels in this ice the vessels were lifted up by the stern as high as six feet seven or eight inches, with a lift to starboard of two feet eight inches, the discomforts and inconvenience of which may well be imagined. During this whole time, also, the men had their knapsacks constantly prepared, as well as sleighs, &c., not knowing but that at any moment the vessels, strong as they were, might be crushed by the ice. They were three weeks without taking off their clothes. Fortunately the ice lifted up rather than crushed the vessels, which lay often at a considerable elevation on the crest of the upheaving ice. It was at this time the scurvy broke out, attacking all the crew and officers. Captain De Haven and Dr. Kane succeeded by assiduous efforts in curing them all. From this ice the vessels emerged on the 10th of June, 1851, after an imprisonment of nine months. During this time they had drifted 1,060 miles, a polar drift unprecedented. During this whole imprisonment the two vessels suffered comparatively little damage. The ADVANCE lost part of her bowsprit and part of her false keel. The RESCUE had her cutwater and bowsprit literally chiselled off. Having got both his vessels liberated Captain De Haven determined again to prosecute his search, and turned the ADVANCE's head to the northward. He succeeded in reaching *Upper Melville Bay*, but was therein again hemmed in with ice. From this he was not liberated until August 19th, at which time the season was so far advanced that it was impossible for him to proceed. He, therefore, reluctantly determined to return home. The ADVANCE called at the *Greenland* ports, where she obtained full supplies of fresh meats, vegetables, fruits, &c., and Dr. Kane soon had the happiness of seeing the scurvy entirely disappear. The expedition has returned without the loss of a man, which speaks volumes alike for the officers and the men. The American vessels last saw the English ship PRINCE ALBERT on the 12th day of August, standing to the south-south-east, after having given up, as Captain De Haven concluded, all hope of getting round the bay ice, and making for the southern passage. Captain De Haven thinks it probable that she would reach *Prince Regent's Inlet*. Dr. Kane thinks, after seeing the regions and the resources on shore, that Sir John Franklin and his crew are probably yet alive. The ADVANCE has brought home the relics of Sir John's visit to the place where three of his men were buried. We learn from Mr. Grinnell, that Lady Franklin entertained the same opinion as Dr. Kane with respect to her noble husband."

MR. C. R. WELD'S LETTER TO "THE TIMES".

"Sir,—The desponding tone of the letter from 'A Captain, R.N.', seems to be founded upon a mistaken interpretation of the last words in Captain Penny's letter. It is quite evident that some personal discussion of the question had taken place between Captain Austin and Captain Penny, and the latter is clearly irritated by being called upon to write any further opinion. He had done all that man with his means could do. What more could be expected of him? How else can we understand Captain Penny's urgent application, at the very moment of his return to England, to have a powerful steamer with which to go back to search beyond *Wellington Channel*? That *channel* had received a complete search. The result of the examination is to show, not only that the route by the north-west pointed out to Sir John Franklin in his instructions existed, but that it was open to him; and, knowing as I do the strong feeling that prevailed in the minds of all his officers, and also of the Admiralty, at that period, I have an entire conviction that this north-west route was taken; and it does seem not a little perverse, after the discovery of traces within the entrance to *Wellington Channel*, to maintain that the missing expedition did not go up that strait.

"Nor does your correspondent's assertion, that Lieutenant M'Clintock's wonderful journey to *Melville Island* demonstrates that Franklin did not reach that island, hold good; for he may be even now on the northern shores of that extensive land, whose limits to the west are unknown.

"Your correspondent overlooks the important fact, that there is evidence of the means of subsistence being found in high arctic latitudes, even more than in southern. Captain Penny saw birds innumerable, and bears, seals, and walruses, the latter of these animals being the most useful of any, in affording not only food,* but fuel; and in the island of *Spitzbergen*, in the high latitude of 80° N., herds of deer and musk oxen have been seen.

"It is clear that Captain Austin could not have shared the opinion of your correspondent relative to the possibility of supporting life for six or seven years in some way or other in the Arctic seas, otherwise he would not have accepted a command, the expected duration of which exceeds the period at which, according to the above theory, they must cease to exist.

"I am, sir, your humble servant,

"C. R. Weld.

"Royal Society, Somerset-house, October 7."

W. F.'s LETTER TO THE "TIMES".

"Sir,—Being one most interested in the fate of the missing expedition under Sir John Franklin, I cannot allow a letter which appears in your columns of the 7th instant, signed 'A Captain, R.N.', to pass unnoticed. It contains some statements that are at variance with facts, and is of a most mischievous and dangerous tendency.

"I do not think that the public generally are aware what Captain Penny's opinion upon this subject is, and having had several interviews with him, I will state in as few words as possible what it is, which will, I think, be the best answer to the Captain's letter.

"In the first place, so far from considering *Wellington Channel* searched, Captain Penny came home for the express purpose of obtaining from the government a powerful steamer to do this service. He wished to sail again this autumn as soon as a steamer could be got ready, but the matter having been laid before an Arctic council, it was decided that the season was too far advanced, and that the spring would be a better time to renew the search. If Captain Penny had considered *Wellington Channel* searched, why did he

* See note on the facility of enticing and capturing bears, page 8.

make an application to Captain Austin for one of his tenders to do this service? Captain Penny is confident in his own mind that Sir John Franklin, having wintered at *Cape Riley*, in $45^{\circ} 6'$, (?)^{*} went up *Wellington Channel*. That there is no document found on *Beechey Island* is, indeed, extraordinary, but this Captain Penny attributes to their having left in a great hurry (as everything on the spot indicates), in consequence of the sudden break up of the ice.

"Now, with regard to their means of subsistence. Captain Penny states that one hundred miles up the *Channel* from *Cape Riley* he finds the ice becoming rotten; and thirty or forty miles further north he comes to open water as far as the eye could see, teeming with animal life. He saw deer, birds of many kinds, seals, and porpoises. This was on the 17th of May. The first bird seen at *Cape Riley*, more than two degrees south, was on the 2d of June. It would be vain to suppose that if Sir John Franklin came to this open water, he would stop and land a boat to build a cairn or leave traces. He would consider this waste of time, and make the best of his way.

"There is no reason to suppose that the expedition is lost, either from being wrecked or starvation, or that they have died of despair, as some say;—Franklin, Crozier, and Fitzjames, would not do that. It is, therefore, the duty of the government, with the new year, to set about fitting out a fresh expedition of search, a powerful steamer and two sailing vessels, commanded by a man of known and tried skill and courage, with ample means at his command, and empowered to act upon his own discretion.

"Pardon me for trespassing so long upon your valuable space; but I know from your article of the 7th that you are in favour of further search, and may England remember that the eyes of all the world are upon her, and may she never think that she has done her duty till she has either restored our long lost countrymen to their homes, or ascertained their fate.

"Your obedient servant,

"W. F.

"Lutterworth, October 9."

ARCTIC COMMITTEE.

(From the *Illustrated London News*, November 1851.)

"The members of this committee continue to hold their sittings, and examine officers of the recent Arctic expeditions. It appears that Captain Sir John Franklin, when parting with an intimate acquaintance at *Woolwich* on the night previous to the day of his sailing in the *EREBUS* for the Arctic regions, said it would be a long time before he would return home, as it was his intention to obey the instructions he had received from the Admiralty as far as possible; but his own impression was that he would obtain a passage up the *Wellington Channel*, and he would leave no means untried to effect a passage up that *Channel* before he returned. The anxiety of the Admiralty and of Lady Franklin that the search for the missing expedition should have previously been made in the direction of *Melville Island* was adopted from the best of motives, as, in the event of the vessels having been wrecked, the most probable place to find any of the survivors would have been in that direction. It having now been ascertained, as the result of the recent expeditions of Captain Austin and Captain Penny, that the *EREBUS* and *TERROR* have not been wrecked in the direction of *Melville Island*, the exertion of the officers and men of future expeditions will be to effect a passage up *Wellington Channel*, as the only direction in which it can now be expected to find or ascertain the fate of the long-absent officers and crews of Sir John Franklin's expedition."

* Point Riley is in Lat. $74^{\circ} 40'$.

EXTRACTS

from the *Nautical Magazine*, for November 1851.

[The following extracts are selected from a paper in the *Nautical Magazine*, and bear very strongly upon the question as to the route adopted by Franklin.]

COLONEL SABINE'S OPINION.

"You ask me, also, 'Could Franklin have gone there?' (into *Smith's Sound*.) If Sir John Franklin had proved that no passage could be found south-west of *Cape Walker*, or to the north-west through *Wellington Strait*, which were the directions he was instructed first to try, he both could and would doubtless have tried *Smith's Sound*, if the research in the two first named directions had left him a sufficiency of provisions. But as we know that he wintered at *Beechey Island*, and the traces exist of the heavy sledges of his reconnoitering parties along the coast to the north and north-west, since traversed by Captain Penny's officers, we know that he had learnt that *Wellington Strait* leads into a wide and extensive sea; and as we know that Sir John Franklin was not the man to turn from an examination which he was directed to make, till he had completed the examination, our first point must be to follow him in the direction which he is most likely to have taken; and I trust we shall see that tried both with steam-tender and steam-launches with as little delay as possible.

"Several circumstances are mentioned to me by Captain Penny, indicative either of occasional very heavy seas on the coasts and islands of *Queen's Channel*, or of an occasional much higher rise in the level of the water than can be well attributed to the surface drift of a sea closed to the north or north-west."

"..... I had the advantage of visiting Captain Penny a day or two ago. He speaks of several pieces of drift-wood found on beaches facing the north, on the southern shores of the great sea, into which the channels on either side of *Hamilton Island* lead; and on islands in that sea. These beaches, therefore, face the communication, if there be one, with the *Great Polar Sea*. We found one piece, and one piece only, as far as I recollect, in all our exploration of the southern shores of *Parry's Islands*: it was toward the south-east extremity of *Melville Island*, between *Points Ross* and *Griffiths*, and was found just as Captain Penny describes those on the north side of the islands, considerably above the usual high water mark, both in height and distance. It is remarkable (in connection with this subject) that Sir Edward Parry considered it probable, for several reasons, that in the vicinity of the spot where we found the drift-wood, *i.e.*, at the east end of *Melville Island*, and on both sides of *Byam Martin Island*, the flood tide came from the northward between the islands. We have therefore, as facts, much drift-wood found in a limited research north of the islands, and a single piece only in a much more extensive research south of the islands. Granting a common origin, or channel of arrival (not necessary, but probable), it might come either from the north or from the south; but it is most reasonable to suppose it to have come from the quarter where it is found in considerable abundance, rather than from the quarter where only a single piece was found: the supposition of a northern channel for its arrival brings with it a train of very important consequences, amongst the most prominent of which are, the indication of a water communication with the continents of *America* or *Asia* more open than that between the southern shores of the *Parry Islands* and those of the continent of *America* lying opposite to them.

"Respecting tides, of which Captain Penny speaks as being so strong, I presume he means the set of water, whether tide or current. I understand him, indeed, to say so distinctly. In either case, a strong set of water such as he describes, is an indication of a considerable reach of open sea. Such an extent of open water as was actually seen by Captain Penny and his

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officers, at a period of the year when Captain Austin was fast bound with a temperature scarcely, I believe, above zero, is indeed a remarkable fact. It may consist with the condition (if they prove such) of a sea of no extraordinary depth, enclosed all around by land, with no other communication but by *Wellington Strait*; but it would be a far more intelligible fact, if that sea should be found to communicate with a deep and extensive ocean to the north. Let that ocean be as extensive as it may, if it is a deep sea, and not much encumbered with land, it will be an open sea whatever may be its latitude.

"I consider it therefore a *geographical problem of first-rate importance*, to ascertain whether or not *Queen Victoria Channel* leads into a sea of that description. If it does, a larger portion of the earth's surface, still unknown to us, may be accessible, and for its physical relations and phenomena, as well as for the completion of the descriptive geography of the globe, will form a field for very interesting and important research. The existence of Wrangel's sea, in parallel circumstance, north of the continent of *Asia*, forms a strong feature in support. *We have also much reason to suppose that we have been preceded in this line of research by Franklin; and that in following it we have great probability of ascertaining his fate, not unmixed with a reasonable probability of still affording aid.*"

LADY FRANKLIN'S OPINION.

....."But notwithstanding this, I am persuaded, now that it is pretty well proved my husband could not have penetrated south-west, according to the first part of his instructions, that he has taken the only alternative those instructions presented him, by going up *Wellington Channel*. Indeed, whatever argument may be used in opposition, there is one in favor of this view, which is stronger than any thing that can be urged against it, and that is, that I *know* he intended to try it. Private connections and domestic confidences cannot be brought forward in discussions of a public nature, nor are likely to be much attended to if they were; but to me they leave no room for doubt or hesitation whatever. Only tell me that they could not have taken a south-west course, and then I know they would besiege the gates of *Wellington Channel* (supposing they found them closed, which is only an hypothesis founded on the passing observations of the last two years), till the happy moment arrived when they yielded to perseverance. For to say there never is a passage in that direction, cannot be affirmed of *Wellington Channel* any more than it can of *Barrow Strait*, which we know was navigated far to the west by Sir E. Parry, though no one has yet been able to do so again. *Wellington Channel* was not only the uppermost object in my husband's mind when he left *England*, but it was also in Capt. Crozier's; and as to Capt. Fitzjames, it was with the most fervent wishes and anticipation that he looked to the northern route, and the younger officers had imbibed the same spirit. There must have been perfect unanimity on the subject, if such were required.

"The multiplied proofs of the prolonged sojourn of the *EREBUS* and *TERRORE* at *Beechey Island*, were not needed to make me feel assured that if the ships could not penetrate to the south-west, and if *Wellington Channel* offered to them no greater obstacle than it presented to Penny, viz., that of an extensive but varying barrier of ice, which, as you know, was diminished last year, in the course of a few hours, by one half of its extent, or fifteen miles!—they would watch and wait for its opening. By that passage, doubt not the ships have gone; and by that, believe me, they must be followed.".....

LETTER FROM MR. JOHN BARROW.

....."The author of the article (in the *Nautical Magazine*) says that 'Franklin was aware of Sir John Barrow's aversion to the *Wellington Channel*, because it was always blocked up with ice.'

"The very reverse is the fact; my father's aversion to it being solely because (as far as experience went) *the Wellington Channel was always entirely free from ice*; and in corroboration of this, I would refer those who are interested in the subject, and desirous of arriving at a right judgment upon all points, to the parliamentary Blue Books, where it will be seen (at page 73, sessional No. 264, for 1848) that Sir John Barrow says, that 'the only chance of bringing them upon the Asiatic coast, is the possibility of some obstructions having tempted them to explore an immense inlet on the northern shore of *Barrow Strait* (short of *Melville Island*), called *Wellington Channel*, which Parry felt an inclination to explore; and more than one of the present party betrayed to me a similar inclination, which I discouraged, no one venturing to conjecture even to what extent it might go, or into what difficulties it might lead.'

"It could not have led them far, if it were always blocked up with ice. My own opinion remains unshaken, that the Franklin expedition has gone through that *channel* to the north-west."

OPINION OF A FRIEND OF CAPTAIN FITZ-JAMES.

"Reasons for believing that Franklin has followed the course of the *Wellington Channel*:-

"*First*—Because Sir John Franklin was ordered to proceed up *Wellington Channel*, that is, if he failed in getting to the south-west of *Cape Walker*. That he did fail in getting to the south-west is the conclusion arrived at by Captain Austin.

"*Secondly*—Because I know there was the greatest disposition on the part of Sir John Franklin's officers to go through the *Wellington Channel*, and to the northward of the *Parry Group*, and particularly so on the part of Captain Fitz-James.

"*Thirdly*—Because nothing has been heard of Sir John Franklin, and it is not easy to assign any other position from which he would not have been heard of before now.

"I know it has been asserted that after wintering at *Cape Riley*, he was drifted out, or went back through *Barrow Strait*, intending to return to *England*, and was wrecked at the head of *Baffin Bay*. I place no more faith in this than I did in the former prophecy, of his having foundered in *Baffin Bay*, before he had even entered the threshold of his discovery.

"In all letters I received from Captain Fitz-James, there was but one idea uppermost—to go a-head. The very words he repeatedly used—'Don't care is the order of the day; I mean, don't care for difficulties or stoppages—go a-head is the wish.' Again, he says (writing from the *Whale Fish Islands*), 'We hear this is a remarkable clear season (1845), but clear or not clear we must go a-head, as the Yankees have it; and if we don't get through, it won't be our fault.' 'The north-west passage is certainly to be gone through by *Barrow Strait*, but whether south or north of *Parry's Group* remains to be proved. I am for north, edging north-west till in longitude 140°.' 'We intend to drink Sir John Barrow's health in going through *Behring Strait*.' These, and a host of similar expressions, lead me to the conclusion that they pushed boldly on through the *Wellington Channel* without casting a look behind, or without an idea of even retracing their steps. The enterprising spirit of Sir John Franklin is known throughout the world; so is that of Captains Crozier and Fitz-James, and from a personal acquaintance with nearly every officer in the expedition, I can assert that but one spirit pervaded the whole."

"DIGEST OF SIR JOHN FRANKLIN'S INSTRUCTIONS.

"The orders are dated 5th May, 1845, and consist of twenty-three clauses, the points of which are these :—

- "1.—Selection to command the expedition.
- "2.—To make for *Davis Strait* and take provisions from Transport.
- "3.—To get into *Lancaster Sound*.
- "4.—Relating to steam propeller.
- "5.—To push to the westward in latitude $74^{\circ} 15'$ to about 98° W., thence to penetrate south-west.
- "6.—If prevented going south-west, and if *Wellington Strait* in passing was observed open, to consider, whether in the ensuing season he should not adopt *Wellington Strait* to the north-west, or persevere to the south-west.
- "7.—No land known in the *Polar Sea* beyond *Parry Islands*.
- "8.—If *Behring Strait* be passed, to proceed to *Sandwich Islands* and round *Cape Horn* home.
- "9.—Relates to wintering in Polar regions.
- "10.—Discretionary powers given as to the wintering and refitting.
- "11.—Caution against separating the vessels, and communicating with captain of the TERROR.
- "12.—To exchange observations.
- "13.—Relates to observations on magnetism.
- "14.—Entrusting magnetic observations to Captain Fitz-James.
- "15.—Portable observatory.
- "16.—Relates to observations.
- "17.—Relates to observations, and deep sea soundings, currents, etc.
- "18.—The north-west passage to the *Pacific* the main object of the expedition.
- "19.—To throw bottles with current papers overboard.
- "20.—To preserve specimens of natural history.
- "21.—Measures in the event of either ship being disabled.
- "22.—To correspond with the secretary, etc., logs, journals.
- "23.—Neutrality."

LADY FRANKLIN AND THE AMERICANS.

(From the *United Service Gazette*, November 1, 1850.)

"In some of the daily papers this week the following letter appeared, with the signature of Lady Franklin :—

"21, Bedford-place, London, September 12.

"My dear Mr. Grinnell—I write to you in much agitation and confusion of mind, which you will not wonder at when you hear that Captain Penny, with his two ships, has returned, and announces the approaching return of Captain Austin's squadron, after being out for only half the period for which they were equipped. . . . Captain Penny's letter is to-day before the Board of Admiralty, urging them in the strongest terms to dispatch instantly a powerful steamer to *Wellington Channel*, in which quarter, to the north-west, he has discovered the passage which there can be scarcely a doubt that the ships have taken, since it is the only opening they have found anywhere, and hundreds of miles of coast have been explored in the lower western direction to *Cape Walker*, *Bank's Land*, and *Melville Island*, without a trace of them. Drift wood in considerable quantities has come out of this north-west channel, and also a small bit of rather fresh English elm, which Penny pronounces must have belonged to our ships, and was probably thrown overboard.

"Thus the right track of the north-west passage and the course of the

missing ships are identical ; and I can only regret that our Squadron was not told they might attempt the making of the passage if they could, for in that case we should have had no abandoning of the search till many more struggles had been made to get into Behring's Straits. The barrier of ice in *Wellington Channel* did not break up last year, nor had done so this, when Penny left ; but his explorations, which extended to one hundred and eighty miles from the entrance, were made beyond it in boat sledges ; sixty miles beyond this he saw water, with land standing to the north-west. I can hardly conceive how he could resist following the open water which he saw beyond him, and which he is convinced leads into the so much talked of Polar basin. He is also convinced, with Dr. Kane, that there is a better climate in these more northern latitudes, with more natural resources of food and fuel ; some proofs of which he brings forward. We have every reason, then, to hope that some of our lost friends and countrymen may yet be able to support life in this region, though unable to return by the way which they came ; and the absence of any traces of them north of *Cape Innes*, on the east side of *Wellington Channel*, proves nothing at all against it, since they were not likely to linger on their way, to examine shores and islands, but would push on as fast as possible while the opportunity favoured them ; and the next trace to be found would probably be their second winter quarters.

"In confirmation of this view, Penny tells me that there are signs of their first winter encampment at *Beechey Island*, and of their having left it suddenly ; and that the summer of 1846, though extremely unfavourable to the whalers, who, on account of the prevailing winds, could not cross over to the west side of *Baffin's Bay*, must have been quite the reverse to our navigators.* You may imagine what a state of anxiety and agitation we are in, till we learn the decision of the Admiralty on the appeal now made to them. . . . Should we fail, we must look to America alone as our resource. To you will belong all the virtue and credit of continuing the search when our countrymen fail ; and to you will belong the honour and glory of succouring the distressed, and of settling for ever that vexed question which for centuries it has been the ambition of Europe, and of England in particular, to solve. I cannot abandon my husband and my countrymen both to their fate, just at the moment when the pathway to them has been found ; and, if need be, and my coming to the *United States* would help in engaging the active and energetic sympathies of your countrymen, painful, in many respects, as this trial would be, I would brace up my courage to the proof.

"But my head is growing weak, and my health is sinking—and then I have a beloved sister (not to mention an aged father, who is not now in a state to be conscious of my absence) whom it would almost break my heart to leave. I am sure you will tell, with all your accustomed truth and candour and kindness, what is your view of this point, in case the Admiralty fail me....

"It appears that it was Captain Austin's intention, to look into *Wellington Channel* himself, and also into *Jones's Sound* before he returned home ; but as to the former, Penny says he will find the ice impassable, so that he will be sure not to be able, as an eye-witness, to see the opening. Nothing, perhaps, could penetrate it in its present state but the four hundred horsepower steamer, and that cannot be done this year, though Penny says, if the steamer could be ready to sail in three weeks or a month from hence, he thinks he could still get her up to *Lancaster Sound* this season, or at any rate to some convenient locality, which would enable him to commence early operations next spring. I intended writing much more to you about your own two gallant ships, and their winter of almost unparalleled anxiety ; but, as I wish to address a few lines to Judge Kane, I believe I must forbear, and refer you to my note to him, which I shall enclose and leave open. Captain Penny has studied the northern part of *Wellington Channel* with

* Should we not read "east side of Baffin's Bay", in place of "west side".

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your names, and the names of our brave and generous allies in your ships. I am greatly pressed for time, having more writing than I can possibly get through.

"Believe me, my dear Mr. Grinnell, ever most truly and respectfully yours,

"Jane Franklin."

"This letter, copied from the *New York* papers, created some little stir among the Arctic Committee, who, we believe, called on Lady Franklin to explain her reasons for so severely reflecting on the English Admiralty. What reply her Ladyship made to the Committee we know not; but subsequently the *Morning Herald*, in a short paragraph, stated that the letter was copied from the American papers, and added that its publication must have been a 'breach of confidence'. Whereupon Lady Franklin wrote the following rejoinder:—

To the Editor of the Morning Herald.

"Sir—There appeared to my great concern in your paper of yesterday a private letter of mine to Mr. Grinnell, without any explanation of the source whence it was derived. Being anxious to exonerate myself from being privy to its publication, I requested a friend of mine to do me the favour of inserting a paragraph which would give the necessary explanation, without dictating the terms in which it was to be made. You have kindly complied with this request, but in adding that the publication of my letter appeared 'a breach of confidence', you have unintentionally caused me still greater pain by making me appear as the accuser of a beloved and honoured friend and benefactor, the most noble-minded and honourable of men.

"I know not how the letter found its way into the American paper, but it is too easy to perceive that the kindest of motives might have induced Mr. Grinnell or his friends to publish it to his countrymen.

"I must entreat you to take some means of counteracting an imputation which, if supposed to proceed from myself, would convict me of great ingratitude and injustice; and can only regret that it is impossible for you to do this without, I fear, again bringing my name before the public.

"Jane Franklin."

THE PROPOSED FURTHER SEARCH FOR SIR JOHN FRANKLIN BY LIEUTENANT PIM, R.N.

[From *The Times*, Nov. 14, 1851.]

"The first meeting of the Royal Geographical Society for the session of 1851, was held, on Monday night, at the rooms of the Society, No. 3, Waterloo-place, and was very numerously attended. The chair was taken, at half-past eight o'clock, by Sir Roderick Murchison, the President of the Society. He had to introduce to their notice Lieutenant Pim, a gentleman connected with the royal navy, who would lay before the meeting a new plan for the relief of Sir John Franklin and his gallant companions in the Arctic seas.

"Sir R. Murchison having read a letter sent by him to the imperial government of *Russia*, with a view of obtaining for Lieutenant Pim the aid and protection of the Russian government in his proposed endeavours to rescue Sir John Franklin and his companions from the Arctic regions, introduced that gentleman to the meeting, who received him with general and enthusiastic cheering.

"Lieutenant Pim commenced by stating that he had been invited to lay before the Society a detailed plan for discovering Sir John Franklin's expedition; and expressed his belief that the missing ships were not to be found on the coast of *America*, but on that of *Asia*. While he was on board Her Majesty's ships *HERALD* and *PLOVER*, exploring the Arctic regions, the fate of Sir John Franklin was daily the subject of consideration and he could

not but be struck with the fact, that the plans adopted for the relief of that gallant little band had been based on the supposition that the *EREBUS* and *TERROR* had failed at the very commencement of their voyage. In fine, he was convinced that Sir John Franklin would not be found on the threshold of the north-west passage. Wrangel's narrative having been perused attentively, the fact that Wrangel, as well as Anjou, found an open sea in several places, during the cold season, in comparatively high latitudes, impressed itself upon him. In support of his views he read an extract from a letter lately received from Admiral Sir Francis Beaufort, in which that officer stated his conviction, that if the *EREBUS* and *TERROR* should succeed in passing through *Wellington Channel*, they would find the *Northern Ocean* comparatively free from ice, and find it an easy matter to penetrate to the westward. Franklin's difficulties would therefore come when, having made his westing, he might endeavour to haul to the southward for *Behring Straits*; for Cook, Beechey, Kellett, and all navigators who had passed through that opening, found the *soundings decrease* on approaching the southern edge of the ice, making it almost demonstrable that a bank of some hundreds of miles in length, and most likely rising up into many islands, stretched across from west to east. If those ships, therefore, did find their way through *Wellington Channel*, they had got into some labyrinth of ice and islands abreast of *Behring Straits*, or further west, on the flats off the coast of *Siberia*. From that opinion of Sir Francis Beaufort, and taking all other circumstances into consideration, it appeared to him that Sir John Franklin, having passed through *Wellington Channel*, attained the *Polynesia*, and would then naturally steer to the westward; and when reaching the meridian of *Behring Straits*, re-enter the ice, in order to penetrate to the *Pacific Ocean*. Difficulties, however, would again impede his progress. Enclosed in the frozen masses which had checked the advance of every navigator from the earliest to the present time, he would be at the mercy of the winds and currents, rendering it problematical to which coast he would be driven,—whether to that of the new or old world. The endurance, hardihood, and courage of a Richardson, a Kellett, a Pullen, and a Rae, had afforded negative evidence that the coast of *Northern America* was not the country where the final settlement of the question, 'What has become of Sir John Franklin?' must be determined. The next place, therefore, to which attention turned, was *Siberia*. Wrangel's narrative, proving that pieces of wreck had been found on the Asiatic shores, and historical accounts stating that various Russian expeditions experienced the greatest difficulties in penetrating even a short distance easterly, made it evident that the very cause which produced that effect upon the Russian vessels, would bring about an opposite result upon any ships which might happen to be about the meridian of *Behring Straits*; consequently, that a well-organized search of the Asiatic shores would afford results highly satisfactory. Her Majesty's ship *HERALD*, after an absence of six years, having returned to *England*, after three times visiting *Behring Straits*, without more success than the squadron on the eastern side of *America*, and the fate of Sir John Franklin being still wrapped in mystery,—he considered it his (Lieutenant Pim's) duty to make known that conviction, and to submit to the Lords Commissioners of the Admiralty a plan for obtaining traces of the missing expedition. His proposal was to start on the 18th of the present month, and to travel by way of *St. Petersburg*, *Moscow*, *Tobolsk*, *Irkutz*, and *Jakoutz*, to the mouth of the *Kolyma*, and thence commence exploring the coast of *Siberia* east and west,—a distance little short of 10,000 miles. He did not ask for a party, but merely for a companion and servant; and stated that the expense attending the journey would be trifling, in comparison with the results which it appeared to promise. To his great disappointment, the Admiralty declined to undertake his plan. Lady Franklin, however, impressed with the hope of obtaining some satisfactory intelligence, requested him (Lieutenant

Pim) to carry out his proposal by private means ; and, unlimited absence being granted by the Admiralty, he had no hesitation in responding to her desire. The funds which Lady Franklin was able to devote to this expedition amounted to no more than £500,—a sum obviously inadequate to such an undertaking. It was therefore determined to use that money for fitting out the expedition, and to appeal to his Imperial Majesty of Russia to assist in effecting this object. An interview with the head of the Foreign-Office was obtained, and he could not speak too gratefully of the kindness of Lord Palmerston on that occasion, as well as Mr. Addington's promptitude in forwarding the necessary documents. It was accordingly his intention to proceed to *St. Petersburg* on the 18th instant, and enlist the sympathy of the Russian government in the cause. His original plan had undergone some modification ; and, in consequence, he was compelled to proceed alone, and look forward to companions provided by the imperial service of *Russia*. Supposing that the negotiation with the court of *Russia* terminated favourably, his track would lead from *St. Petersburg* to *Moscow* by railway ; from *Moscow* to *Irkutz*, by *Teligi*, on sledges, a distance of 3,544 miles ; and from *Irkutz* to *Jakoutz*, also on sledges, a distance of 1,824 miles. The whole journey occupying about four months. At *Jakoutz* all regular travelling conveniences terminated ; and the 1,200 miles to the *River Kolyma*, as well as the 2,000 miles of search, would have to be performed in a manner best adapted to the resources of the country. In 1854 the task might be completed, if, unfortunately, before that time, no traces should have been found.

"Captain Penny concurred in the view taken by Lieutenant Pim, and believed that Sir John Franklin might have advanced by *Behring Straits*, as he found a large quantity of drift-wood in the channel that he (Captain Penny) had discovered in his late voyage.

"The Chairman then moved the thanks of the meeting to Lieutenant Pim for the lecture they had that night heard, and coupled with it the following resolution :

"That the Council of the Royal Geographical Society have requested the President, on their behalf, to wait on the First Lord of the Admiralty, and make known to him the proposed expedition of Lieutenant Pim, the steps which have been taken by the Royal Geographical Society, in behalf of that officer, with the Russian authorities, and to solicit the countenance and assistance of the Admiralty."*

"The resolution was carried by acclamation."

* It has been announced in the "Times", we are rejoiced to add, that Her Majesty's Government have since advanced, through the Geographical Society, the sum of £500 in aid of Lieutenant Pim's projected journey.

REMARKS, ETC.

THE course pursued by Sir John Franklin after quitting his winter quarters at *Beechey Island* in 1845-6, has been a fruitful subject for speculation among all interested in the fate of the missing expedition. Whilst some advance the idea that Sir John proceeded westward, past *Cape Walker*, and to the southward of *Melville Island*, others imagine that he returned eastward along *Barrow Strait*, and turning to the north, attempted the supposed passage by *Jones' Sound*; and, lastly, some conceive that Franklin, assisted by an open season and favourable winds, sailed up the *Channel*, at whose southern extremity he had wintered, and, obtaining a considerable westing in the *Great Gulf* or *Sea* into which *Wellington Strait* conducts, has, owing to casualty or unforeseen obstacles, and a remote position, become incapacitated either to continue his course, or to return to those parts which are known to us. The evidences collected by the recent operations under Captains Austin, Penny, etc., though sufficiently meagre and inconclusive, seem, nevertheless, to tell all one way—and that in support of the route by *Wellington Channel*.

The foregoing despatches, etc., have been collected, put together, and digested, under the hope that from the facts related in the official reports of the explorers, added to the various comments and opinions their publication has elicited from the press, some overbalancing *probability* (for little beyond a good probability can be attainable in the case) might, by sifting and weighing, be deducible. And if we do not deceive ourselves, the following considerations will contribute towards establishing the probability sought.

1st. The fact of the *only traces* hitherto discovered being found at the very gate or entrance of Penny's newly-discovered Sea.

2nd. The total absence of all other marks, relics, or intelligence relating to the ships in every other quarter yet explored, taken in connection with the improbability, (assuming a westerly or southerly course from *Beechey Island* to have been adopted, thus naturally approximating them to the American coast line), of the vessels having failed to come under the notice of the Esquimaux in case of their safety, or, in case of their wreck and destruction, some vestige or token of the catastrophe coming to light during a period so extended. For nearly the whole seaboard of Arctic America, it must be remembered, has been examined by various searching parties, without reckoning upon the stimulus to observation created by the

reward offered to the natives for information—and its utter unproductiveness.

3rd. That, presuming the *EREBUS* and *TERROR* to have *both* been lost whilst following the said westerly or southerly direction, the unlikelihood that of all the numerous hands not one should succeed in attaining the adjacent continent, or *Hudson's Bay* territories, to relate the disaster.

4th. It seems, indeed, that the only conditions under which an opinion, favourable to the safety of Franklin and his party, can be sustained are,—

1. His having advanced to a very remote position in some high latitude, and—

II. His detention there, produced either by wreck or by blockade, and continued by the lack of means to overcome the distance to be traversed ere inhabited or frequented regions could be reached.

5th. Bearing upon this part of the question, is the subjoined paragraph, which is transferred from the President of the Geographical Society's last address, delivered in May 1850. It says, "On the 15th of last August, the *HERALD* had attained the latitude of $71^{\circ} 12' N.$, and longitude $170^{\circ} 10' W.$; and on the 16th discovered an almost inaccessible island of granite, rising 1400 feet above the sea, beyond which a range of high land was seen." "It becomes a nervous thing," continues Captain Kellett, "to report a discovery of land in these regions without actually landing on it; but as far as a man can be certain who has one hundred and thirty pair of eyes to assist him, and all agreeing, I am certain we have discovered an extensive land." Now it will be recollected that Serjeant Andreyev, the active Russian who conducted an expedition of discovery in the *Icy Sea*, in 1762, affirmed that he had reached a country called *Tikigen*, having a coast line trending nearly parallel to that of northern *Siberia*, and inhabited by a race named *Kraihaï*. This account was held to be apocryphal by most geographers, and imputed to an optical delusion by Baron von Wrangel; yet the narrative of Captain Kellett goes far to corroborate Andreyev's statement. Even the high land descried by von Wrangel himself from *Yakan* may, it is not too much to say, have formed some portion of the disputed region; and besides the discoveries of Captain Kellett, elevated peaks, which may reasonably be concluded to form a part of the same land, were observed by Commander Moore, whose track lay further eastward than that of the *HERALD*. Now, putting these circumstances in conjunction, the inference is far from an improbable one, that a continuous coast line may extend from the vicinity of *New Siberia* in the west, to the vicinity of *Banks's Land* in

the east. In the event of such an hypothesis proving correct, it will be obvious that should Franklin have succeeded in penetrating through, and to the westward of *Wellington Channel*, the interposition of this tract would preclude all possibility of his bringing his ships again so far south as to reach *Behring's Strait*, unless the westerly course were greatly prolonged, or the *Wellington Channel* again traversed."

Accepting the preceding theory as a good one, the conditions of remoteness and isolation would be fulfilled; and it is not so unlikely an event as at first blush it seems, that Franklin may have succeeded in passing the 170th meridian of west longitude, whilst far to the north of *Behring's Strait*,* and be even now wedged up somewhere above the continent of Asia; or, not impossibly, that of Europe.

With regard to the means of sustenance offered in these regions, we would refer to the notes at page 8, and likewise to the evidence on this head afforded by the foregoing papers. The last, especially, go to prove an extreme abundance of animal life in the neighbourhood, and to the north of the *Parry Islands*, and shew, perhaps, that one of the worst-founded apprehensions in relation to the absent expedition is that based upon their imagined want of food.

* It is scarcely necessary to observe, that the higher the latitude reached, the shorter the distance between the meridians. Thus, a journey from one given meridian to another, which would occupy a *month's* space in latitude 68°, might, at the same rate of progress, be accomplished, twelve degrees farther north, in a *fortnight*.

(For further observations as to Franklin's course, see the extracts from the November number of the *Nautical Magazine*, inserted at page 36. These were not perceived until subsequently to the jotting down of the preceding few remarks, but aid most materially the view which we have there ventured to take.)

APPENDIX.

ARCTIC COMMITTEE.

Since printing off the foregoing, the Arctic Committee have delivered their Report.

They recommend, that "an expedition should be dispatched next year to *Barrow Strait*, consisting of the same ships which composed Captain Austin's division, viz., two sailing ships, and two steamers, with orders to proceed direct to *Beechey Island*, and to consider that harbour—beyond which they think one sailing ship and one steamer should on no account be taken—as the base of future operations."

That "all the strength and energy of the expedition should be directed towards the examination of the upper part of *Wellington Strait*."

That "in the event of *Wellington Strait* being found open on the arrival of the expedition in the summer of 1852, one of the ships and one of the steamers should seek winter-quarters to the north; thus placing themselves in a more favourable position for commencing the land search in the ensuing season."

And that, in the opinion of the Committee,—

"All further exploration in the direction of *Melville*, or to the south-west of *Cape Walker*, is wholly unnecessary."

LETTER FROM CAPTAIN PENNY TO THE GEOGRAPHICAL SOCIETY.

"Pulmuir, Aberdeen, Dec. 3, 1851.

"Sir,—I beg to lay before you, and the scientific body to which you belong, a few observations which came under my notice during my late voyage in search of Sir John Franklin, which I consider of great importance at the present critical moment.

"On the 25th of August, 1850, having joined Captain Ommanney on the west side of the *Wellington Channel*, and seen the traces found by him of the missing ships, I considered it my proper course to return to the eastern shore of the channel, with the view of examining those parts more closely than had been done before.

"The result of my return was most satisfactory, for not until then were the winter quarters of the missing ships discovered; and what is of still more importance in my estimation as regards the route of the missing ships, a watch-tent upon a height about four miles north and west from the position occupied by the ships. The tent was evidently for the purpose of watching every move of the ice in *Wellington Channel*. We also saw the ruts of sledges going and returning from making observations upon the channel, and in the tent we found a small piece of paper, with the words

'to be called'. The other part of which must have been torn off, thus evidently showing that a regular watch had been kept.

"On the 5th of September, 1850, from the top of *Cape Spencer*, a height of at least seven hundred and thirty feet, open water was observed beyond the fixed ice in the channel. The strong easterly gales which we experienced some time previous to the above date, had counteracted the prevailing current from the westward, and had driven the ice through *Queen Victoria Channel* into the *Arctic Basin*.

"On the 7th of September, a strong northerly gale brought away fifteen miles of ice down *Wellington Channel*, leaving only about fifteen miles of ice between the two seas.

"Having commenced our travelling on the 13th of April, 1851, I came upon water and decayed ice on the 15th of May, in the channel between *Cornwallis Land* and *Baillie Hamilton Island*, obliging me to return by the east of the said island, and then to the north: we gained *Point Surprise*, in latitude $76^{\circ} 2'$, longitude $95^{\circ} 55'$. The water washed the *Point* at my feet, and extended twenty-five miles west. The sky indicated water to the north round *Dundas Island*.

"The moment I stood upon *Point Surprise*, with a full view to the west, I exclaimed, 'Through this channel Sir John Franklin has gone in clear water. Oh, for a boat.' With this conviction on my mind I returned, with the determination to use every exertion to get a boat up to this water.

"On the 29th of the same month, Messrs. Goodsir and Marshall, advancing with their party along the shore of *Cornwallis Land*, were forced to return for water with still thirty days' provision upon their sledges.

"Again, on the 31st of May, Captain Stewart, having advanced as far as *Cape Becher*, by the east side of the channel, and along *Albert Land*, came to water, and from a height of seven hundred feet found nothing but open sailing ice as far as the eye could reach, to the west and north-west.

"On the 6th of June a boat was fully equipped, and a journey commenced for *Victoria Channel*, some of the party having only returned thirty-four hours from a journey of thirty-one days. On the 17th of the same month, the boat was launched into the water in longitude 96° west, and continued to contend for thirty-three days with adverse winds and rapid tides, which brought the drifting ice in such quantities to the eastward, as to block up the various channels between the islands, leaving an open sea beyond, seen from the top of *Baillie Hamilton's Island*. My utmost exertions were so hampered, that only three hundred and ten miles of island coast were examined by the boat party; but had a strong easterly wind prevailed for only a short time, so as to counteract the effects of the westerly current, what might not have been done even with that small boat?

"It is my conviction that the tide flows from the north-west in *Victoria Channel*, although there is a regular rise and fall of four feet; still, in mid-channel, the current seemed to run the greater part of the twelve hours to the eastward, which, I have no doubt, was greatly influenced by the strong N.W. and W.N.W. winds which prevailed for a whole twelvemonth; but amongst islands and narrow channels one would require longer time for making observations to enable him to speak with certainty on this subject.

"In *Davis's Straits* and *Baffin's Bay* the tide flows from the south; in *Lancaster Sound* it flows from the east.

"With the knowledge we have acquired by our late search, who can now doubt the route Sir John Franklin has pursued? A watch-tent to observe every move in the *Strait*, and the evident signs of a hasty departure, amount, in my mind, to a conviction that he had passed in open water through *Wellington Strait* and *Victoria Channel*, and along *Prince Albert's Land*, which I am strongly of opinion exceeds five hundred miles north-west; and until that distance is reached no further traces will be discovered.

"Had not Sir John Franklin been further advanced, would I not have

found traces of him in the islands I have searched, or about headlands, where birds build their nests, and thousands of eider and king ducks are to be found? I may mention here, that during my last voyage a whale-boat was filled with eggs on a small island on the east side of *Davis Straits*, in latitude $73^{\circ} 40'$, and we could have taken four boatloads off the same island had the birds been in season; and when such is the result of experience, who can deny that Sir John Franklin and his brave companions may not exist still?

"On the 20th of June, I saw narwals, walrus, and white whales making their way down the channel, seeking the protection of the ice, the same as I have seen in latitude 69° in *Davis Straits*. These animals migrate north at the same season every year for the same purpose, which is a convincing proof that a sea does exist beyond *Queen Victoria Channel*, comparatively open and free from ice, and that they instinctively seek the protection of the ice, which remains longer in these narrow straits.

"Sir John Franklin and his brave companions left their native shores to battle for science. Humanity demands that this search should not be given up until the searchers shall have passed through the *Arctic Basin* and out into the *Pacific Ocean*; and until such a course be pursued, the fate of our missing countrymen can never be ascertained.

"I have, &c.

"Wm. Penny,

"Late Commander of an Arctic Expedition.

"To the President of the Royal Geographical Society."

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NARRATIVE OF FOUR RUSSIAN SAILORS WHO SPENT SIX YEARS
ON THE ISLAND OF SPITZBERGEN.

(From the "Annual Register" for 1774, pp. 150-100.)

THESE MEN SUBSISTED ENTIRELY UPON THE PRODUCE OF THE CHASE,
THE ANIMALS BEING SECURED BY RUDE AND SELF-CONSTRUCTED
WEAPONS, (ONE BOW AND ARROWS AND TWO SPEARS.)

"A Narrative of the extraordinary Adventures of four Russian sailors who
were cast away on the desert Island of East Spitzbergen.

"Some of our readers may perhaps consider this recital in the same kind of light they do the history of *Robinson Crusoe*; the truth of these adventures, is, however, sufficiently authenticated. When these unfortunate sailors first arrived at Archangel, they were examined apart by Mr. Klinstadt, Chief Auditor of the Admiralty of that city, who minuted down all the particulars, which exactly corresponded with each account. Mr. Le Roy, Professor of History in the Imperial Academy, some time after, sent for two of the men, viz., Alexis Himkof, and Himkof, his godson, to Petersburg, from whose mouths he took the following narrative, which also agreed with Mr. Klinstadt's minutes. The original was published in the German language, at Petersburg, in the year 1769, and transmitted from thence to the ingenious Mr. Banks, who, with several other members of the Royal Society, were so well pleased with the account, that they directed a translation of it to be made into English.

"In the year 1743, one Jeremiah Okladmkof, a merchant of *Mesen*, a town in the province of *Jugovia*, and in the government of *Archangel*, fitted out a vessel, carrying fourteen men; she was destined for *Spitzbergen*, to be employed in the whale or seal fishery. For eight successive days after they had sailed, the wind was fair; but on the ninth it changed, so that instead of getting to the west of *Spitzbergen*, the usual place of rendezvous for the Dutch ships annually employed in the whale fishery, they were driven eastward of those islands; and, after some days, they found themselves at a small distance from one of them, called *East Spitzbergen*, by the Russians, *Maloy Broun*; that is, *Little Broun* (*Spitzbergen*, properly so called, being known to them by the name of *Bolschoy Broun*, that is, *Great Broun*). Having approached this island within almost three wersts, or two English miles, their vessel was suddenly surrounded by ice, and they found themselves in an extremely dangerous situation.

"In this alarming state, a council was held; when the mate, Alexis Himkof, informed them, that he recollected to have heard that some of the people of *Mesen*, some time before, having formed a resolution of wintering upon this island, had accordingly carried from that city timber proper for building a hut, and had actually erected one at some distance from the shore.

"This information induced the whole company to resolve on wintering there, if the hut, as they hoped, still existed; for they clearly perceived the

imminent danger they were in, and that they must inevitably perish if they continued in the ship. They dispatched, therefore, four of their crew in search of the hut, or any other succour they could meet with. These were Alexis Himkof, the mate, Iwan Himkof, his godson, Stephen Scharapof, and Feodor Weregine.

"As the shore on which they were to land was uninhabited, it was necessary that they should make some provision for their expedition. They had almost two miles to travel over loose ridges of ice, which being raised by the waves, and driven against each other by the wind, rendered the way equally difficult and dangerous; prudence, therefore, forbade their loading themselves too much, lest, being overburthened, they might sink in between the pieces of ice, and perish.

"Having thus maturely considered the nature of their undertaking, they provided themselves with a musket and powder-horn containing twelve charges of powder, with as many balls, an axe, a small kettle, a bag with about twenty pounds of flour, a knife, a tinder-box and tinder, a bladder filled with tobacco, and every man his wooden pipe. Thus accoutred, these four sailors quickly arrived on the island, little suspecting the misfortunes that would befall them.

"They began with exploring the country, and soon discovered the hut they were in search of, about an English mile and a half from the shore. It was thirty-six feet in length, eighteen feet in height, and as many in breadth. It contained a small ante-chamber, about twelve feet broad, which had two doors, the one to shut it up from the outer air, the other to form a communication with the inner room: this contributed greatly to keep the larger room warm, when once heated. In the large room was an earthen stove, constructed in the Russian manner; that is, a kind of oven without a chimney, which serves occasionally either for baking, for heating the room, or, as is customary amongst the Russian peasants, in very cold weather, for a place to sleep upon.

"The reader must not be surprised at my mentioning a room without a chimney; for the houses inhabited by the lower class of people in Russia are seldom built otherwise. When a fire is kindled in one of these stoves, the room, as may well be supposed, is filled with smoke; to give vent to which, the door and three or four windows are opened. These windows are each a foot in height, and about six inches wide: they are cut out of the beams whereof the house is built, and by means of a sliding-board, they may, when occasion requires it, be shut very close. When, therefore, a fire is made in the stove, the smoke descends no lower than the windows, through which, or through the door, it finds a vent, according to the direction of the wind; and persons may continue in the room without feeling any great inconvenience from it. The reader will readily conjecture that the upper part of such a place, between the windows and the ceiling, must be as black as ebony; but, from the windows down to the floor, the wood is perfectly clean, and retains its natural colour.

"They rejoiced greatly at having discovered the hut, which had, however, suffered much from the weather, it having now been built a considerable time: our adventurers, however, contrived to pass the night in it. Early next morning they hastened to the shore, impatient to inform their comrades of their success, and also to procure from their vessel such provisions, ammunition, and other necessaries, as might better enable them to winter on the island.

"I leave my readers to figure to themselves the astonishment and agony of mind these poor people must have felt when, on reaching the place of their landing, they saw nothing but an open sea, free from the ice, which, but a day before, had covered the ocean. A violent storm, which had arisen during the night, had certainly been the cause of this disastrous event. But they could not tell whether the ice which had before hemmed in the vessel,

agitated by the violence of the waves, had been driven against her, and shattered her to pieces, or whether she had been carried by the current into the main; a circumstance which frequently happens in those seas. Whatever accident had befallen the ship, they saw her no more; and as no tidings were ever afterwards received of her, it is most probable that she sunk, and that all on board of her perished.

"This melancholy event depriving the unhappy wretches of all hope of ever being able to quit the island, they returned to the hut from whence they had come, full of horror and despair.

"Their first attention was employed, as may easily be imagined, in devising means of providing subsistence, and for repairing their hut. The twelve charges of powder they had brought with them soon procured them as many reindeer; the island, fortunately for them, abounding in these animals.

"I have before observed, that the hut, which the sailors were so fortunate as to find, had sustained some damage, and it was this: there were cracks in many places between the boards of the building, which freely admitted the air. This inconveniency was, however, easily remedied, as they had an axe, and the beams were still found (for wood in those cold climates continues through a length of years unimpaired by worms or decay), so it was easy for them to make the boards join again very tolerably; besides, moss growing in great abundance all over the island, there was more than sufficient to stop up the crevices, which wooden houses must always be liable to. Repairs of this kind cost the unhappy men the less trouble, as they were Russians; for all Russian peasants are known to be good carpenters; they build their own houses, and are very expert in handling the axe.

"The intense cold which makes those climates habitable to so few species of animals, renders them equally unfit for the production of vegetables. No species of tree, or even shrub, is found on any of the islands of *Spitzbergen*; a circumstance of the most alarming nature to our sailors. Without fire, it was impossible to resist the rigour of the climate; and without wood, how was that fire to be produced or supported? Providence, however, had so ordered it, that in this particular, the sea supplies the defects of the land. In wandering along the beach, they collected plenty of wood, which had been driven ashore by the waves, and which at first consisted of the wrecks of ships, and afterwards of whole trees with their roots, the produce of some more hospitable, but to them unknown climate, which the overflowing of rivers, or other accidents, had sent into the ocean. This will not appear incredible to those who have perused the journals of the several navigators who have been forced to winter in *Nova Zembla*, or any other country in a still more northern latitude.

"Nothing proved of more essential service to these unfortunate men during the first year of their exile than some boards they found upon the beach, having a long iron hook, some nails of about five or six inches long, and proportionably thick, and other bits of old iron fixed in them; the melancholy relics of some vessels cast away in those remote parts. These were thrown ashore by the waves at a time when the want of powder gave our men reason to apprehend that they must fall a prey to hunger, as they had nearly consumed those reindeer they had killed. This lucky circumstance was attended with another, equally fortunate; they found on the shore the root of a fir-tree, which nearly approached to the figure of a bow.

"As necessity has ever been the mother of invention, so they soon fashioned this root to a good bow by the help of a knife; but still they wanted a string, and arrows. Not knowing how to procure these at present, they resolved upon making a couple of lances to defend themselves against the white bears, by far the most ferocious of their kind, whose attacks they had great reason to dread.

"Finding they could neither make the heads of their lances nor of their

arrows without the help of a hammer, they contrived to form the large iron hook, mentioned above, into one, by heating it, and widening a hole it happened to have about its middle with the help of one of their largest nails. This received the handle, and a round button at one end of the hook served for the face of the hammer. A large pebble supplied the place of an anvil, and a couple of reindeer's horns made the tongs. By the means of such tools, they made two heads of spears; and after polishing and sharpening them on stones, they tied them as fast as possible with thongs made of reindeer-skins to sticks about the thickness of a man's arm, which they got from some branches of trees that had been cast on shore.

"Thus equipped with spears, they resolved to attack a white bear; and after a most dangerous encounter, they killed the formidable creature, and thereby made a new supply of provisions. The flesh of this animal they relished exceedingly, as they thought it much resembled beef in taste and flavour. The tendons they saw with much pleasure could, with little or no trouble, be divided into filaments of what fineness they thought fit. This perhaps was the most fortunate discovery these men could have made; for, besides other advantages, which will be hereafter mentioned, they were hereby furnished with strings for their bow.

"The success of our unfortunate islanders in making the spears, and the use these proved of, encouraged them to proceed, and to forge some pieces of iron into heads of arrows of the same shape, though somewhat smaller in size than the spears above-mentioned. Having ground and sharpened these like the former, they tied them with the sinews of the white bears to pieces of fir, to which, by the help of fine threads of the same, they fastened feathers of sea-fowl, and thus became possessed of a complete bow and arrows. Their ingenuity, in this respect, was crowned with success far beyond their expectation; for during the time of their continuance upon the island, with these arrows they killed no less than two hundred and fifty reindeer, besides a great number of blue and white foxes. The flesh of these animals served them also for food, and their skins for clothing and other necessary preservatives against the intense coldness of a climate so near the Pole.

"They killed, however, only ten white bears in all, and that not without the utmost danger; for these animals being prodigiously strong, defended themselves with astonishing vigour and fury. The first our men attacked designedly; the other nine they slew in defending themselves from their assaults; for some of these creatures even ventured to enter the outer room of the hut in order to devour them. It is true, that all the bears did not shew (if I may be allowed the expression) equal intrepidity, either owing to some being less pressed by hunger, or to their being by nature less carnivorous than the others; for some of them which entered the hut immediately betook themselves to flight on the first attempt of the sailors to drive them away. A repetition, however, of these ferocious attacks threw the poor men into great terror and anxiety, as they were almost in a perpetual danger of being devoured. The three different kinds of animals above-mentioned, viz., the reindeer, the blue and white foxes, and the white bears, were the only food these wretched mariners tasted during their continuance in this dreary abode.

"We do not at once see every resource. It is generally necessity which quickens our invention, opening by degrees our eyes, and pointing out expedients which otherwise might never have occurred to our thoughts. The truth of this observation our four sailors experienced in various instances. They were for some time reduced to the necessity of eating their meat almost raw, and without either bread or salt; for they were quite destitute of both. The intenseness of the cold, together with the want of proper conveniences, prevented them from cooking their victuals in a proper manner. There was but one stove in the hut, and that being set up agreeably to the Russian taste, was more like an oven, and consequently not well adapted for

boiling any thing. Wood also was too precious a commodity to be wasted in keeping up two fires; and the one they might have made out of their habitation to dress their victuals would in no way have served to warm them. Another reason against their cooking in the open air was the continual danger of an attack from the white bears. And here I must observe, that suppose they had made the attempt, it would still have been practicable for only some part of the year; for the cold, which in such a climate for some months scarce ever abates, from the long absence of the sun, then enlightening the opposite hemisphere, the inconceivable quantity of snow which is continually falling through the greatest part of the winter, together with the almost incessant rains at certain seasons, all these were insurmountable obstacles to that expedient.

"To remedy, therefore, in some degree, the hardship of eating their meat raw, they bethought themselves of drying some of their provisions during the summer, in the open air, and afterwards of hanging it up in the upper part of the hut, which, as I mentioned before, was continually filled with smoke, down to the windows; it was thus dried thoroughly by the help of that smoke. This meat, so prepared, they used for bread, and it made them relish their other flesh the better, as they could only half dress it. Finding this experiment answer in every respect their wishes, they continued to practise it during the whole time of their confinement upon the island, and always kept up by that means a sufficient stock of provisions. Water they had in summer from small rivulets that fell from the rocks, and in winter, from the snow and ice thawed; this was of course their only beverage, and their small kettle was the only vessel they could make use of for this and other purposes.

"It is well known that sea-faring people are extremely subject to the scurvy, and it has been observed, that this disease increases in proportion as we approach the Poles, which must be attributed either to excessive cold, or to some other cause yet unknown. However that may be, our mariners, seeing themselves quite destitute of every means of cure in case they should be attacked with so fatal a disorder, judged it expedient not to neglect any regimen generally adopted as a preservative against this impending evil. Iwan Himkof, one of their number, who had several times wintered on the coast of *West Spitzbergen*, advised his unfortunate companions to swallow raw and frozen meat, broken into small bits; to drink the blood of reindeer warm, as it flowed from their veins immediately after killing them; to use as much exercise as possible, and, lastly, to eat scurvy-grass (*Cochlearia*), which grows on the island, though not in great plenty.

"I leave the faculty to determine whether raw frozen flesh, or warm reindeer blood be proper antidotes to the distemper; but exercise and the use of scurvy-grass have always been recommended to persons of a scorbutic tendency, whether actually afflicted with the disorder or not. Be this as it may, experience at least seems to have proved these remedies to be effectual; for three of the sailors, who pursued the above method, continued totally free from all taint of the disease. The fourth, Theodore Weregine, on the contrary, who was naturally indolent, averse to drinking the reindeer blood, and unwilling to leave the hut when he could possibly avoid it, was, soon after their arrival on the island, seized with the scurvy, which afterwards became so bad, that he passed almost six years under the greatest sufferings; in the latter part of that time he became so weak, that he could no longer sit erect, nor even raise his hand to his mouth; so that his humane companions were obliged to feed and tend him, like a new-born infant, to the hour of his death.

"I have mentioned above, that our sailors brought a small bag of flour with them to the island. Of this they had consumed about one half with their meat; the remainder they employed in a different manner, equally useful. They soon saw the necessity of keeping up a continual fire in so

cold a climate, and found that if it should unfortunately go out they had no means of lighting it again ; for though they had steel and flints, yet they wanted both match and tinder.

" In their excursions through the island, they had met with a slimy loam, or a kind of clay, nearly in the middle of it. Out of this they found means to form a utensil which might serve for a lamp, and they proposed to keep it constantly burning with the fat of the animals they should kill. This was certainly the most rational scheme they could have thought of ; for to be without a light in a climate where, during winter, darkness reigns for several months together, would have added much to their other calamities. Having, therefore, fashioned a kind of lamp, they filled it with reindeer's fat, and stuck in it some twisted linen, shaped into a wick. But they had the mortification to find, that as soon as the fat melted, it not only soaked into the clay, but fairly run through it on all sides. The thing, therefore, was to devise some means for preventing this inconveniency, not arising from cracks, but from the substance of which the lamp was made being too porous. They made, therefore, a new one, dried it thoroughly in the air, then heated it red hot, and afterwards quenched it in their kettle, wherein they had boiled a quantity of flour down to the consistence of thin starch. The lamp being thus dried and filled with melted fat, they now found, to their great joy, it did not leak. But for great security, they dipped linen rags in their paste, and with them covered all its outside. Succeeding in this attempt, they immediately made another lamp, for fear of an accident, that in all events they might not be destitute of light ; and when they had done so much, they thought proper to save the remainder of their flour for similar purposes.

" As they had carefully collected whatever happened to be cast on shore to supply them with fuel, they had found amongst the wrecks of vessels some cordage, and a small quantity of oakum (a kind of hemp, used for calking ships), which served them to make wicks for their lamps. When these stores began to fail, their shirts and their drawers (which are worn by almost all Russian peasants) were employed to make good the deficiency. By these means, they kept their lamp burning without intermission from the day they first made it (a work they set about soon after their arrival on the island), until that of their embarkation for their native country.

" The necessity of converting the most essential parts of their clothing, such as their shirts and drawers, to the use above specified, exposed them the more to the rigour of the climate. They also found themselves in want of shoes, boots, and other articles of dress ; and as winter was approaching, they were again obliged to have recourse to that ingenuity which necessity suggests, and which seldom fails in the trying hour of distress.

" They had skins of reindeer and foxes in plenty, that had hitherto served them for bedding, and which they now thought of employing in some more essential service ; but the question was how to tan them. After deliberating on this subject, they took to the following method. They soaked the skins for several days in fresh water, till they could pull off the hair pretty easily ; they then rubbed the wet leather with their hands till it was nearly dry, when they spread some melted reindeer fat over it, and again rubbed it well. By this process, the leather became soft, pliant, and supple, proper for answering every purpose they wanted it for. Those skins which they designed for furs they only soaked for one day, to prepare them for being wrought, and then proceeded in the manner before-mentioned, except only that they did not remove the hair. Thus they soon provided themselves with the necessary materials for all the parts of dress they wanted.

" But here another difficulty occurred. They had neither awls for making shoes or boots, nor needles for sewing their garments. This want, however, they soon supplied by means of the bits of iron they had occasionally collected. Out of these they made both ; and, by their industry, even

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brought them to a certain degree of perfection. The making eyes to their needles gave them indeed no little trouble; but this they also performed with the assistance of their knife; for having ground it to a very sharp point, and heated red hot a kind of wire, forged for that purpose, they pierced a hole through one end, and by whetting and smoothing it on stones, brought the other to a point, and thus gave the whole needle a very tolerable form. I myself examined some of these needles, and could find fault with nothing except the eye; which being made in the manner above-mentioned, was so rough, that it often cut the thread drawn through it; an imperfection they could not possibly remedy, for want of better tools.

"Seissars, to cut out the skins, were what they next had occasion for; but having none, their place they supplied with their knife; and though there was neither taylor nor shoemaker amongst them, yet they contrived to cut out their leather and furs well enough for their purpose. The sinews of the bears and reindeer, which, as I mentioned before, they had found means to split, served them for thread; and thus provided with the necessary implements, they proceeded to make their new cloaths.

"Their summer dress consisted of a kind of jacket and trowsers, made of skins prepared as I have mentioned above; and in winter they wore long fur gowns, like the Samojedes, or Laplanders, furnished with a hood, which covered their head and neck, leaving only an opening for the face. These gowns were sewed close round, so that to put them on, they were obliged to bring them over their heads like a shirt.

"Excepting the uneasiness which generally accompanies an involuntary solitude, these people, having thus by their ingenuity so far overcome their wants, might have had reason to be contented with what providence had done for them in their distressful situation. But that melancholy reflection, to which each of these forlorn persons could not help giving way, that perhaps he might survive his companions, and then perish from want of subsistence, or become a prey to the wild beasts, incessantly disturbed their minds. The mate, Alexis Himkof, more particularly suffered; who having left a wife and three children behind, sorely repined at his being separated from them; they were, as he told me, constantly in his mind, and the thought of never more seeing them made him very unhappy.

"When our four mariners had passed nearly six years in this dismal place, Feodor Weregine, whose illness we had occasion to mention above, and who all along had been in a languid condition, died, after having, in the latter part of his life, suffered most excruciating pains. Though they were thus freed from the trouble of attending him, and the grief of being witnesses to his misery, without being able to afford him any relief, yet his death affected them not a little. They saw their number lessened, and every one wished to be the first that should follow him. As he died in winter, they dug a grave in the snow, as deep as they could, in which they laid the corpse, and then covered it to the best of their power, that the white bears might not get at it.

"Now at the time when the melancholy reflections occasioned by the death of their comrade were fresh in their minds, and when each expected to pay this last duty to the remaining companions of his misfortunes, or to receive it from them, they unexpectedly got sight of a Russian ship; this happened on the fifteenth of August, 1749.

"The vessel belonged to a trader of the sect called by its adherents *Stara Vieva*, that is, *The Old Faith*, who had come with it to *Archangel*, proposing it should winter in *Nova Zembla*; but, fortunately for our poor exiles, Mr. Vernezobre proposed to the merchant to let his vessel winter in *West Spitzbergen*, which he at last, after many objections, agreed to.

"The contrary winds they met with on their passage made it impossible for them to reach the place of their destination. The vessel was driven towards *East Spitzbergen*, directly opposite to the residence of our mariners,

who, as soon as they perceived her, hastened to light fires upon the hills nearest their habitation, and then ran to the beach, waving a flag made of a reindeer's hide, fastened to a pole. The people on board seeing these signals, concluded that there were men on the island who implored their assistance, and, therefore, came to an anchor near the shore.

"It would be in vain to attempt describing the joy of these poor people at seeing the moment of their deliverance so near. They soon agreed with the master of the ship to work for him on the voyage, and to pay him eighty rubles on their arrival for taking them on board, with all their riches, which consisted in fifty pud, or two thousand pound weight of reindeer fat, in many hides of these animals, and skins of the blue and white foxes, together with those of the ten white bears they had killed. They took care not to forget their bow and arrows, their spears, their knife and axe, which were almost worn out, their awls and their needles, which they kept carefully in a bone box, very ingeniously made with their knife only, and, in short, every thing they were possessed of.

"Our adventurers arrived safe at *Archangel* on the twenty-eighth of September, 1749, having spent six years and three months in their rueful solitude.

"The moment of their landing was nearly proving fatal to the loving and beloved wife of Alexis Himkof, who being present when the vessel came into port, immediately knew her husband, and ran with so much eagerness to his embraces, that she slipped into the water, and very narrowly escaped being drowned.

"All three on their arrival were strong and healthy;* but having lived so long without bread, they could not reconcile themselves to the use of it, and complained that it filled them with wind. Nor could they bear any spirituous liquors, and, therefore, drank nothing but water."

* Thus we see that Nature in the Arctic Regions, as elsewhere, accommodates herself to circumstances. The hardships and sufferings of the first and second years were probably, by force of habit, mitigated in the third, and rendered comparatively light during the remainder of their sojourn. The principle is equally applicable to Franklin and his crews.

ANSWERS TO QUESTIONS FROM THE ARCTIC COMMITTEE.

BY SIR JOHN RICHARDSON.

"Question 1st.—Do you suppose it probable that Sir John Franklin, or any portion of the crews composing his Expedition, still survive? If so, in what direction?"

"Answer.—I think it probable that part of the crews may still survive, to the north, or north-west of *Melville Island*.

"Question 2d.—What are your grounds for forming that opinion?"

"Answer.—The reply to this question divides itself naturally into two heads, viz., the possibility of people surviving for a series of years on the polar islands, and the direction which the discovery ships took after leaving their winter quarter of 1845-6.

"With reference to the first head, many facts may be adduced to prove that life may be supported for a number of years on animals inhabiting the land and waters of the most northern known islands. The existence of Eskimos up to the 77th parallel, and perhaps still higher in *Baffin's Bay*, is in itself sufficient evidence of the means of subsistence being produced in these latitudes. Except practical skill in hunting seals, and the art of building snow-houses, that people have no qualifications that may not be surpassed by the intelligence, providence, and appliances of Europeans. The islands lying to the north of *Lancaster Sound* and *Barrow's Straits* were once frequented by Eskimos, and the remains of their winter huts, though perhaps two centuries old, are still numerous along the coasts. Why these islands have been abandoned by them in recent times is unknown, but that the tribes that once resorted thither were not cut off by any sudden pestilence or famine is apparent from the absence of human skeletons in the vicinity of the deserted dwellings, while the much-decayed bones of whales, walruses, seals, deer, musk-oxen, birds, and other animals are abundant, and the small fireplaces built near the huts still contain morsels of charred wood, hidden beneath the moss which has overgrown them in the lapse of years. The absence of the natives is favourable, inasmuch as the animals, whether marine or terrestrial, not being hunted, will be more easily accessible.

"Musk-oxen frequent *Melville Island*, and with ordinary caution a whole herd may be secured by moderately skilful hunters, since it is the habit of the animals to throw themselves into a circle on the approach of danger, and to remain in that position, with their heads facing outwards, though individuals of their number are falling from their ranks under the fire of their assailants. Lieutenant M'Clintock, on his recent admirable pedestrian journey, shot a musk-bull, and having gone to his sledges for assistance to carry down the meat, on his return with a party of men found the herd still grazing beside their slaughtered leader. Reindeer also pass over from the continent to the islands in numbers in the months of May and June, and though they are shy animals if they be allowed to get scent of man, they may be readily approached on their lee side by a hunter who possesses the requisite stock of patience.

"The nature of the country in the vicinity of the ships will necessarily influence its productiveness in animal life, and in the absence of information respecting it, our conclusions cannot but be in great measure conjectural. A flat limestone tract, whereon the surface stone is continually splitting into thin slates under the action of frost, and from which the mud is annually washed into the sea by floods of melting snow, or a low, shingly, barren flat, such as that coasted by Captain Ommanney, produces few grasses and little vegetation of any kind, hence it is shunned by herbivorous animals, or if they must necessarily cross it in their migrations, they do so at

speed; but in the sheltered ravines of a sandstone or trap country, or in the narrow valleys which occur among granite or gneiss rocks, there are grassy meadows to which deer and musk-oxen resort, the latter also frequent lichen-producing acclivities, which are generally denuded of snow by high winds. Mr. Rae saw the reindeer migrating [south to north] over the ice of *Dolphin* and *Union Straits* in the spring, and passing in great haste into the interior of *Wollaston Land*. There seems to be no reason why these herds should not range beyond the 80th parallel, if the islands reach so high, since the same kind of deer travel annually from the continent of Europe to *Spitzbergen*, over a wider expanse of sea-ice. Polar hares are also numerous on *Wollaston* and *Melville Islands*, and as they are very tame and consequently easily shot, they add to the means of support. In the neighbourhood of open water the polar bear is frequent, and being bold in its approaches, falls a ready sacrifice to a party armed with fowling pieces. The simplicity of the Arctic fox renders its capture a very easy affair. Fish of various kinds are by no means scarce in the Arctic seas, and the fresh water lakes abound in trout. Sir John Franklin was well acquainted with the methods of taking these by hooks or in nets set under the ice in spring.*

"Brent geese, eider and king ducks, gulls and many other water fowl, resort in the breeding season in vast flocks to the most remote islands; and it may be necessary to state here, that these birds reach their breeding stations in the high latitudes only in July; hence officers travelling a month or two earlier, when the ground is still covered with snow, are not aware of the manner in which the most barren islets teem with life later in the summer.

"Walrus and seals of several species were observed by Captain Penny and his officers to be numerous in *Victoria Channel*, and *beluge* and black whales may be looked for wherever open water of considerable extent exists. Both kinds abound in the sea that washes *Cape Bathurst*.

"This enumeration comprises all the principal animals likely to yield food to a party shut up by ice in the *Arctic Archipelago*. How far they could be made available for feeding the crews of Sir John Franklin's ships for four years beyond the expenditure of his English provisions, must depend on many circumstances concerning which we are at present in total ignorance. Such as whether the ships were enclosed in ice and drifted to a distance from the land, in which case the hope of aid from terrestrial animals would fail; or, whether they were simply shut up in a convenient harbour with their resources entire; or, thirdly, whether the ships were overwhelmed by ice or pressed ashore and wrecked, and if so, what clothing and ammunition were saved, also what portions of the wreck convertible into fuel drifted on shore. Fuel is as indispensable as food in the high latitudes, and the Eskimos generally employ animal fat for this purpose, especially in the winter. Drink in that season can be procured only by melting snow or ice, and for this service one pound of fat, at least, is required daily to make drink for three people, exclusive of other cookery.

"It seemed necessary that I should enter into this lengthened detail, in order to present a faithful view of the prospects of ships' crews shut up to the north of *Melville Island*. We must also advert to the fact, that provi-

* "From all I can learn from men who have spent years in these regions, the provisions which Sir J. Franklin took out with him from this country, and the certainty of being able to add largely to the supply, the facts cannot fail to satisfy the most sceptical on this important head. I firmly believe he has provisions for years to come.

"Mr. Kennedy, who is gone out in charge of the *PRINCE ALBERT*, and has spent nearly all his life in those regions, told me that he has been for two years depending on what he and his party could procure for food, and that, with any common exertion, he could have got as much in one season as would serve them for two; he has killed 280 head of deer in four hours, with twelve men, each deer weighing, on an average, about 2½ cwt. Commander McClintock stated to me that, when at *Melville Island*, in the last expedition, he could procure sufficient food for his party, but had no means of cooking it. This question is easily answered. Sir John Franklin had a very good stock of coals for steam purposes, a great portion of which he could reserve. He has also two ships; and could he not use one for fuel, if required?"—Mr. William Coppin, in *Letter to Liverpool Albion*, Jan. 1852.

sions for the whole year must be secured in two short summer months; hence a skilful and complete organization of the hunting parties would be necessary to husband the natural resources of the country. Rash and awkward efforts would surely drive the animals out of the district.

"The shortness of the hunting season would be a great obstacle to the movement of a large party, either towards the continent or *Lancaster Sound*. Many of the number would be sick, and the remainder could scarcely transport their disabled companions, the utensils, and a year's provisions, to any great distance. We ought also to take into account the probable ravages of scurvy among the crews, in the course of so many years' seclusion in the north. That disorder has hitherto always appeared in a greater or lesser degree in the discovery ships after the second winter, and it is likely to be severe and fatal, just in proportion to the scantiness of the diet on which the people feed.

"Much of what I have advanced above is conjectural, since we are ignorant of the position of the ships, and it is fortunate that we can refer to facts to prove that life may be maintained in the most Arctic lands under circumstances, at first sight, seemingly the most hopeless. A narrative printed in St. Petersburg in 1768, by M. Le Roy, and translated and published in Parkinson's collection, relates the adventures of four Russian sailors, who being left on *Spitzbergen* almost destitute of supplies of any kind, supported themselves there by their ingenuity and activity for six years and a quarter.*

"I may also adduce the success of Mr. Rae in wintering on the very unpromising shores of *Repulse Bay*, as another proof of the possibility of sustaining a party on the products of an Arctic country. That coast yields no drift timber, but trusting to the withered stems of a herbaceous *andromeda*, he determined on passing the winter there, and having built a house of stones gathered from the beach, and collected the *andromeda* into small cocks like so much hay, he fed his party of thirteen men for eleven months, principally on the produce of his own gun and that of his Eskimo interpreter.† In the month of September, 1846, alone, 63 deer, 172 ptarmigan, and 116 salmon, were brought into store; and when he departed in 1847, after completing his discovery and survey of the shores of *Akkolee* or *Committee Bay*, he returned to *Churchill* with more than a third of the two months provisions with which he originally set out, and with his well-fed crew in excellent health and prime working condition. These facts, and they might be largely added to, will, I believe, be generally considered as sufficient to prove the general argument of the northern islands being frequented in summer by herds of animals sufficient to feed large bodies of men."

REPLIES TO QUESTIONS FROM THE ARCTIC COMMITTEE. BY DR. WILLIAM SCORESBY.

"Question.—Do you suppose it probable that Sir John Franklin, or any portion of the crews composing his Expedition, still survive; and what are the grounds for forming that opinion?

"Reply.—That Sir John Franklin, or some portion of his associates, may still survive, is a position which cannot be controverted. It follows, therefore, that *some degree of probability*, whatever that degree may be, does exist. Such probability, it appears to me, is involved in, or supported by, a variety of considerations. Sir John Ross was absent and unheard of for *four years* and some months (though never at a greater distance from positions often visited by the whalers than 250 miles), and returned with nearly all

* See detailed account at page 51.

† A whaling master of great experience strongly advises the supply of *rifles* to the searching expeditions.

his crew in health. Hence, I conceive that Sir John Franklin, or some portion of his associates, with incomparably superior equipment and resources, might yet survive, at some much greater distance beyond the positions ordinarily visited, though a period of somewhat more than *five years* (reckoning from the date of the plain indications and traces of him found on and near *Beechey Island*) have since elapsed without further information. 2. The Esquimaux, in similar regions, as cold, as desolate, and as apparently resourceless (*altogether* resourceless indeed, except in Arctic animals), live out, not six or seven winters merely, but a fair portion of the ordinary life of man. Why then may not hardy enterprising Britons, sustained, over and above, by the moral courage and Christian hope which preserved the same Franklin, a Richardson, a Back, and others, when the ordinary powers of life in men experienced in like hardships, Canadian voyages, failed? Why may they not be yet surviving amid the desolateness of Arctic solitudes, and the wreck of the hopes of the timid and doubting? 3. In the well-known case of four Russian seamen, who, after the loss of their ship on the coast of *Spitzbergen* in 1743, took refuge on an island near the main, three out of the four survived on resources (except a few pounds of flour, and a little tobacco) entirely provided by themselves, during a period of six years and three months, whilst unheard of, and assumed to have perished, and were then rescued, and, enriched with the results of their hunting and fishing, restored in health to their friends. With facts such as these before us,—with the knowledge of their extensive original resources, and of the abundance of animal life in the region into or beyond which I believe they have entered, available for the extension of their original supplies,—I cannot but believe it to be probable, that Sir John Franklin, or some of his associates in adventure, do yet survive.*

"In the entire absence of either information or traces of the expedition beyond the spring of 1846, I might observe, there is, in my judgment, no essential grounds for detracting from the assumed probability. There being no information,—none among them having yet returned from whence we could hope to seek them out,—only necessarily implies, either that their appliances for ice travelling, or their condition of physical strength (circumstances quite to be expected) are inferior to ours. And there being no observable traces within the extent of recent researches, except at *Beechey Island*, can prove nothing against such probability, or against the direction we believe they have pursued, as marks on shore would scarcely be planted anywhere except under circumstances of detention, and might not be planted till the second summer's progress was closed, or if planted, might not be seen.

"It may be proper to notice (as bearing on the question of probability of success of the expedition) a conjecture which some have entertained, that the ships may have been wrecked, and that the entire crews may have summarily perished in the Arctic ices. There is only one special case, however, and that, I think, not in the least degree probable in respect to the Franklin expedition, in which such *summary catastrophe*, attended by the imagined destruction of the adventurers, could, I believe, be rationally contemplated; and that is, the case of the ships being drifted out to seaward, after the manner of Sir James Ross and Captain de Haven, and, on approaching the

* Wherever Sir John Franklin may be, assuming his ships to be ice-bound, we must bear in mind that the range of his exploring parties, radiating in any and every direction all round his ships, must be limited to the distance that can be accomplished in *half* a summer's journey, going and coming; say, in 44, 58, 60, 62, and in two instances (Bradford and McClintock), 80 days. The same number of days required to advance, must be reckoned upon for return to the ships and resources before the winter sets in; therefore the number of days of each trip, and the distance gone over, must be halved. Now a week's advance up the channel, against a four or five knot tide, giving us 500 miles (Penny's estimate), would leave a large portion of the summer season for land excursions, if not the first year, at least the second; and an exploring party out 80 days, and averaging during the 40 days they advanced 12 miles a day, would thus in their 40 days cover 480 miles of country in any direction they might proceed.—M.

seaward edge of a pack of ponderous ices, being overturned by a heavy gale at sea. And even in this possible case, the contingencies are such as not, in any instance that I am aware of, to have ever been fulfilled, even among the thousands and tens of thousands of adventurers in these regions in pursuit of the whale fishery, so that the entire crews of two ships, with the ships themselves (and these, as to the Franklin expedition, among the strongest ever sent out to the Arctic seas), should be so completely annihilated, as to leave not a wreck behind. In every other case but this,—of which I believe we have no corresponding or commensurate example in modern history, as to *Davis' Strait*, or *Baffin's Bay*,—any sudden catastrophe happening to a ship within the icy regions referred to would yield at least the opportunity of escape to the crew, by the platform of the ice itself, to which, in the first instance, they might retreat.* But against the conjecture alluded to, in regard to its bearing on probabilities, we have to set the incomparably better supported conjecture of the ships having advanced on the object of their mission towards the north-west into such a position or circumstances as to render the self-applied efforts of the voyagers inadequate to the effecting of their retreat. For as the probability of the discovery ships advancing in the direction they wished to pursue (as they might have advanced apparently either to the westward or the north-west) must obviously be greater than that of their being driven away, under some special embarrassment, in the very contrary direction, the conjecture of the least likely circumstance, consummated by a barely possible issue in total annihilation, should, I conceive, have the least possible weight when set against the contrary probabilities."

**NOTES ON THE DISTRIBUTION OF ANIMALS AVAILABLE AS FOOD IN
THE ARCTIC REGIONS. BY MR. AUGUSTUS PETERMANN.**

(From the "*Athenæum*", March 6, 1852.)

"It has long been a common but erroneous supposition that animal life within the Arctic regions decreases more and more as the Pole is approached. This opinion probably had its origin chiefly in the observation made respecting the distribution of mankind; for the number of our fellow-creatures living beyond the circle is exceedingly small, and, as far as we know, ceases altogether between the seventy-fifth and seventy-seventh parallels. The Polar regions permit, indeed, a precarious existence to man; but it is quite different as regards the Polar animals, many of which are so thoroughly adapted to the intense cold and other features of those regions, that they could not even exist in any other clime. Consequently animal life is found as much in the Polar as in the tropical regions, and though the number of *species* is decidedly inferior to the number in the latter, yet, on the other hand, the immense multitudes of *individuals* compensate for the deficiency in the former respect. If, as the writer has said—in the '*Atlas of Physical Geography*', some years ago, with regard to this point—'if we were to conclude from a large number of species, that there must be a large number of individuals, we should come to erroneous conclusions, for such is frequently not the case. The Arctic and tropical countries furnish an excellent example, at least in their Mammalian and Ornithological Faunas. We need only refer to the crowds of birds which hover over the islands and shores of the north, or to the inconceivable myriads of penguins met with by Ross on the Antarctic lands, where there was not even the smallest appearance of vegetation;

* Captain George Harrison (of thirty years' experience in command of whalers) states, in a letter printed in the April number of the '*Nautical Magazine*', his belief that out of the whole of the 108 ships wrecked since the first discovery of a passage through *McLellan Bay*, not more than ten lives have been lost.

and, among the quadrupeds, to the thousands of fur animals that are annually killed in the Arctic regions. Wrangell gives a fine description of animal life in the *Kolyma* district of *Siberia*, one of the coldest regions of the globe: the poverty of vegetation is strongly contrasted with the rich abundance of animals; countless herds of rein-deer, elks, black bears, foxes, sables, and grey squirrels, fill the upland forests; stone foxes and wolves roam over the low grounds. Enormous flights of swans, geese, and ducks arrive in spring, and seek deserts, where they may moult and build their nests in safety. Eagles, owls, and gulls pursue their prey along the sea coast; ptarmigans in troops among the bushes, and little snipes are busy along the brooks and in the morasses. Baer, also, relates that a walrus hunter on the rocks of *Nova Zembla* caught in a few hours 30,000 lemmings. On the other hand, in Australia, and other regions of the tropical and temperate zones, a traveller will frequently journey for weeks together, and pass over hundreds of miles of country, without meeting with a single quadruped.

"'I will,' the writer adds, 'in the first place, proceed to indicate the regions to which these remarks refer; those, namely, which comprise the Arctic fauna. On this point it will be seen that I have adopted narrower limits than other authors, inasmuch as I have taken the northern limit of woods as my southern boundary of the region under consideration. It is true that some Arctic animals are found to the south of this line, like the rein-deer,—still these are not exclusively Arctic in their character, and they are also, more or less, of migratory habits. The ice-fox, a beautiful little animal, well known to all Arctic voyagers, and decidedly of Arctic character, does not extend to the south of the line assumed, which also coincides with the extreme northern limit of the reptiles, and corresponds pretty closely with the line of 50°, mean summer temperature. The region thus comprises *Iceland*, *Spitzbergen*, *Nova Zembla*, the extreme northern shores of Europe and Asia, with the north-eastern extremity of the latter, including also the sea of *Kamtschatka* and the *Aleutian Islands*, but excluding the peninsula of *Kamtschatka*. On the American side it comprises a considerable portion of *British North America*, the northern part of *Labrador*, and the whole of *Greenland*.

"Though several classes of the animal creation—as, for example, the reptiles—are entirely wanting in this region, those of the mammals, birds, and fishes, at least bear comparison, both as to number and size, with those of the tropics,—the lion, the elephant, the hippopotamus, and others, being not more notable in the latter respect than the polar bear, the musk ox, the walrus, and, above all, the whale. Besides these, there are the moose, the rein-deer, the wolf, the polar hare, the seal, and various smaller quadrupeds. The birds consist chiefly of an immense number of aquatic birds. Of fishes, the salmon, salmon-trout, and herring are the principal, the latter especially occurring in such myriads as to surpass everything of the kind met with in tropical regions. Nearly all these animals furnish wholesome food for man. They are, with few exceptions, distributed over the entire region. Their number, however, or the relative intensity of the individuals, is very different in different parts. Thus, on the American side we find the animals increase in number from east to west,—on the shores of *Davis's Straits*, *Baffin Bay*, *Lancaster Sound*, *Regent Inlet*, fewer are met with than in *Boothia Felix* and the *Perry Group*. The abundance of animal life in *Melville Island* and *Victoria Channel* is probably not surpassed in any other part of the American side. Proceeding westwards to the *Russian* possessions, we find considerable numbers of animals all round and within the sea of *Kamtschatka*, as also to the north of *Behring's Straits*. The yearly produce of the Russian Fur Company in America is immense, and formerly it was much greater. Pribylow, when he discovered the small islands named after him, collected within two years 2,000 skins of sea otters, 40,000 sea bears (*Ursine seals*), 6,000 dark ice foxes, and 1,000 poods of walrus teeth. Lütke, in his voyage round the world, mentions, that in the year 1803, 800,000 skins of the *Ursine seal* alone were

accumulated in *Unalaska*, one of the depôts of the Russian Fur Company; 700,000 of these skins were thrown into the sea, partly because they were badly prepared, and partly in order to keep up the prices. But in no other part of the Arctic zoological region is animal life so abundant as in the north-eastern portion of Siberia, especially between the rivers *Kolyma* and *Lena*. A description of the *Kolyma* district has already been given in the preceding remarks, to which the following particulars may now be added. The first animals that make their appearance after the dreary winter, are large flights of swans, geese, ducks, and snipes; these are killed by old and young; fish also begin to be taken in nets and baskets placed under the ice. In June, however, when the rivers open, the fish pour in in immense numbers. At the beginning of the present century, several thousand geese were sometimes killed in one day at the mouth of the *Kolyma*; about twenty years later, when Admiral Wrangell visited those regions, the numbers had somewhat decreased, and it was then called a good season when 1,000 geese, 5,000 ducks, and 200 swans were killed at that place. Rein-deer hunting forms the next occupation of the inhabitants. About the same time the shoals of herrings begin to ascend the rivers, and the multitudes of these fish are often such, that in three or four days 40,000 may be taken with a single net. On the banks of the river *Indigirka* the number of swans and geese, resorting there in the moulting season, is said to be much greater even than on the *Kolyma*. West of the *Lena*, and along the whole of the remainder of the *Siberian* shores as far as *Nova Zembla*, and including that island, animal life presents a great contrast to the preceding portion, as it is nowhere found in such abundance as in the districts already described, and in many parts it is extremely scarce. *Spitzbergen* completes our very general circumpolar survey. Here, though plenty of animals are found, among which are very acceptable fat rein-deer, still the number of animals generally is greatly inferior to that of north-eastern *Siberia*. It will naturally be asked, whence arises this great difference in the distribution, or rather, the relative intensity of animals within the Arctic region? The reply is furnished by the climate, and particularly by the distribution of temperature. On comparing the zoological and also the botanical features with the observations of temperature made within the Arctic regions, I find that the summer temperature is of the utmost consequence to the existence and development of both animal and vegetable life, and that, without exception, where the summer temperature is the highest, animals are found most plentiful, and the reverse where the temperature is the lowest. Thus, of all the shores of the Arctic basin, those of the north-eastern *Siberia* possess the greatest abundance of animal life, because there the temperature is comparatively the highest in summer, although in winter the same region is the coldest on the face of the globe.

"Without going further into detail. I will now merely add a few words as to the bearings of the foregoing observations on Sir John Franklin's Expedition.

"The general opinion is that the missing vessels have been arrested somewhere between *Wellington Channel* and *Behring's Straits*, and the *Siberian* shores, and most probably their position is nearer to the latter than to the former points. As these three regions abound in animal life, we may fairly conclude that the intervening portion partakes of the same character, and moreover, that the further Sir John Franklin may have got away from *Wellington Channel*, and the nearer he may have approached the north-eastern portion of Asia, the more he may have found the animals to increase in number. The direction of the isothermal lines strongly corroborates this assumption, as they are indicative of a higher summer temperature in that region than in any other within the Polar basin. And as those countries are perhaps entirely uninhabited by man, the animals there would have continued in their primeval or original numbers, unthinned by the wholesale massacres in which myriads are destroyed for the sake of their skins or teeth.

"An interesting fact was mentioned in this Society by Lieut. Osborne, namely, that Captain Penny in September 1850, had seen enormous numbers of whales running southwards from under the ice in *Wellington Channel*.^{*} We know this to be also the case in the Spitzbergen Sea every spring, and that these animals are numerous along the *Siberian* coasts. This not only proves the existence of one, or perhaps two, Polar Seas, more or less open throughout the year, but also that these seas moreover abound in animal life,—to satisfy enormous numbers of whales an amount of food is required which cannot be small. And it is well known among the Tchuktchi, on the north-eastern coasts of *Siberia*,—where land to the north is said to exist in contiguity and probably connected with the lands discovered by Capt. Kellett,—that herds of rein-deer migrate between those lands and the continents.

"Taking all these facts into consideration, the conclusion seems to be a reasonable one, that Franklin, ever since he entered *Wellington Channel*, has found himself in that portion of the Arctic regions where animals probably exist in greater plenty than in any other. Under these circumstances alone Franklin's party could exist as well as other inhabitants of the Polar regions, but we must not forget, that in addition to the natural resources at their command, they would in their vessels possess more comfortable and substantial houses than any native inhabitants of the same regions."

DR. KANE, U.S.N., UPON THE RESOURCES OPEN TO FRANKLIN.

(From the Lectures delivered at Washington.)

"Nor is there much reason to apprehend that the missing party has perished from cold or starvation or disease. The Igloö, or snow-house, of the Esquimaux, is an excellent and wholesome shelter. The servants of the Hudson's Bay Company preferred it to the winter hut; and for clothing, the furs of the polar regions are better than any of the products of Manchester. The resources which that region evidently possesses for the support of human life, are certainly surprisingly greater than the public are generally aware of. Narwhal, white-whale, and seal, the latter in extreme abundance, crowd the waters of *Wellington Channel*; indeed, it was described as a region 'teeming with animal life.' The migrations of the eider duck, the brent goose, and the auk—a bird about the size of our teal—were absolutely wonderful. The fatty envelope of these marine animals, known as blubber, supplies light and heat, their furs warm and well adapted clothing, their flesh wholesome and antiscorbutic food. The reindeer, the bear, and the fox, also abounded in great numbers, even in the highest latitude attained. Add to all this, that the three years provisions which Franklin carried out, was calculated according to the proverbial liberality of the British Admiralty, and was indeed abundant for a support during four years and a half, and that he was the man of all others whom necessity had taught the lesson of husbanding his resources, and of adding to them when occasion permitted; and we have a summary of what might be made a conclusive reply to the apprehensions on the score of a want of food.

"In a word, Dr. Kane announced, that after a careful comparison of all the natural resources of this region, he was convinced that food, fuel, and clothing, the three great contributors to human existence, were here in super-abundant plenty."

^{*} The breath of the whale ceases the instant the ANIMAL is under water, whether clear of ice or not. The time this creature can hold its breath is well known, as is likewise the average distance it can swim without breathing. (The Greenland whale can remain under water from ten to twenty minutes, and its maximum velocity is stated to be six miles per hour.) Now this very distance, and no more, may be fairly assumed as the utmost extent of the frozen surface of ice to the north-west, under which the whales swam (from clear water to clear water), running south in "enormous numbers".—M.

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Explanation.

The dark green colour shows the extent of ice formed during every winter along the Arctic shore.

The green arrows denote the direction and extent of the Drifts in Spring and Summer.

The blue colour shows the probable extent of open Sea in winter.

The blank spots is entirely unknown.

▨ Countries containing Forests. The chief Forest-regions have a darker shading.

□ Countries destitute of Trees.

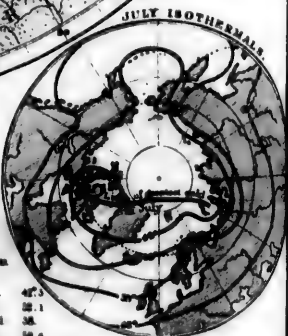
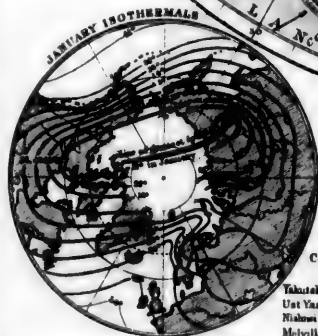
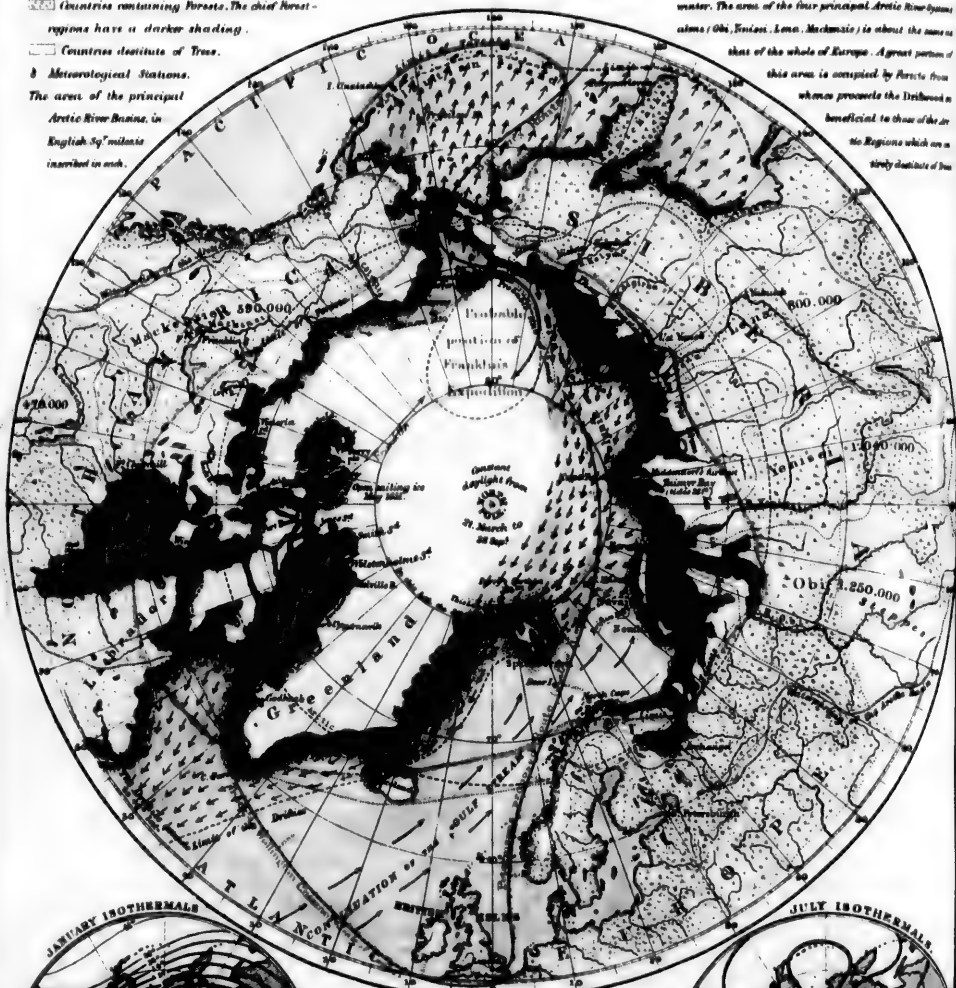
• Meteorological Stations.

The area of the principal Arctic River Basins, in English Sq. miles, is inscribed on each.

Polar Chart to illustrate A. PETERMANN'S PAPERS ON THE ARCTIC REGIONS.

The Arctic Basin.

The term Arctic Basin is generally applied to the Arctic Ocean only, but to us of some importance to us comes and comprehensive understanding of the Natural or Physical Features, to include within it those Countries which are drained off by that Ocean. The mighty Rivers, - of the Asiatic side particularly, are one of the prime-movers of the Polar Currents, breaking up the ice formed during the winter. The area of the four principal Arctic River Systems; Obi, Enisei, Lena, Mackenzie is about the same as that of the whole of Europe. A great portion of this area is occupied by Forests from whence proceeds the Driftwood so beneficial to those of the Arctic Regions which are strictly destitute of Trees.



ISOTHERMAL LINES of the coldest and hottest months of the Year.

In matters regarding the Physical Geography of the Arctic Region the consideration of the Distribution of Temperature is of paramount importance, next will be found that the distribution of Animal and Vegetable Life, the extent of Ice &c. depend much more on the direction of the isothermal lines than on that of the lines of latitude.

Comparative view of the mean Temperature in

JANUARY.				JULY.			
Yakutsk	- 45.5	F° Churchill	- 25.0	Water I.	35.5	Melville I.	47.5
Ust Yanak	- 30.0	Water I.	25.0	Spitzberg Sound	30.0	F° Franklin	32.1
Nikolai Kolyanok	- 31.0	F° Franklin	22.5	Novaya Zemla	30.0	F° Churchill	30.0
Melville I.	- 31.0	Godthaab	10.1	Port Bowen	30.0	Ust Yanak	30.0
Port Bowen	- 29.0	Novaya Zemla	2.0	Novaya Zemla	31.0	Nikolai Kolyanok	31.0
Boothia Felix	- 28.7	D°	9.0	Godthaab	30.0	Yakutsk	60.0
				Godthaab	12.0	Boothia Felix	41.0

Engaged on Sheet by A. Petermann

London: A. Crundell, Street Works

MR. AUGUSTUS PETERMANN'S PLAN OF SEARCH.

(From the Arctic Blue Book.)

To Admiral Sir Francis Beaufort.

"5, Camden Street North, 23rd January, 1852.

"SIR,—I have the honour to make to you the following communication relative to the search after Sir John Franklin, which I am anxious humbly to submit to the special notice of the Lords Commissioners of the Admiralty.

"The subject of Sir John Franklin's expedition has so long filled the minds of the most eminent men, and excited the interest of the whole world, that I fear I am laying myself open to the imputation of great presumption in venturing suggestions respecting this subject. Nevertheless I have considered it my duty not to withhold the results of a comprehensive and earnest, yet calm, inquiry; and having been impressed with the necessity that no time should be lost in making those results as extensively known as possible, I inserted in the *Athenæum* of last Saturday (the 17th instant) the remarks of which the following is a copy.

"It is the general opinion that Franklin has passed through *Wellington Channel*. If so, it is beyond doubt that he must have penetrated to a considerable distance further, so as to have rendered it exceedingly difficult, if not impossible, to retrace his steps, should he have found it impracticable to proceed in any other direction. It may be idle to speculate on his probable direction and distance from *Wellington Strait*, but a line drawn from *Melville Island* to the *Herald* and *Plover Islands* (north of *Behring's Straits*), and another from *Melville Island* to *Spitzbergen* on the American side, would, with the *Siberian* coasts and islands on the Asiatic side, include the space in which he must have been arrested, a space of fearful extent, when it is considered that the whole of the regions hitherto explored by the various expeditions sent in search of him are scarcely one-third of those which remain unexplored.

"It is a well-known fact that there exists to the north of the *Siberian* coast, and, at a comparatively short distance from it, a sea open at all seasons; it is beyond doubt that a similar open sea exists on the American side to the north of *Parry* group; it is very probable that these two open seas form a large navigable Arctic ocean.

"It is evident that until an entrance into this Arctic basin has been effected, that is to say, into that part of it which is comparatively open and navigable, scarcely any hope can be entertained of rescuing Franklin, or of ascertaining his fate. The determination to send another expedition to *Wellington Channel* is noble and generous, but it is perhaps questionable whether the present season will prove as favourable as the last, and whether, indeed, the expedition will succeed in passing through *Wellington Channel* to the north. In short, *Wellington* and *Behring's Straits*, the two chief entrances from the American side into the Polar basin, have, owing to the proximity of the land and accumulation of ice, hitherto frustrated the most determined advances of the various expeditions in those directions.

"There are only two other sea entrances into the Polar basin. These are between *Greenland* and *Spitzbergen*, and between *Spitzbergen* and *Novaia Zemlia*. With respect to the former, I shall refrain from comment, as the difficulties connected with it are very great. I therefore confine myself to the latter; and, coming at once to the point, I would suggest, that the wide opening between *Spitzbergen* and *Novaia Zemlia* most probably offers the easiest and most advantageous entrance into the open navigable Polar sea, and perhaps the best route for the search after Sir John Franklin.

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"From those navigators who have attempted, during the summer months, to penetrate northward in that direction—Barentz as early as 1594—we learn that a barrier of ice was found to stretch across the sea between these two groups of islands. And such undoubtedly is the case every year with each recurring summer. It is that immense body of Arctic ice which every spring is known to drift with a powerful current from the *Siberian* coast towards the Atlantic Ocean. In the 80th parallel, and beyond it to the south, it meets with the shores of *Greenland*, *Spitzbergen*, and *Novaia Zemlia*. Between the two latter it encounters the Gulf Stream, which prevents its drifting further south in that direction, and thus renders the shores of northern Europe entirely free from that unwelcome visitor, whereas the American countries in the same latitudes are more or less encased in ice throughout the whole year. On the other hand, between *Greenland* and *Spitzbergen*, the icebearing current steadily pursues its way, passing *Iceland* and the southern extremity of *Greenland*, and reaching the shores of *Newfoundland* and as far as 40° north latitude; so that while its course is arrested between the northern part of *Novaia Zemlia* and *Spitzbergen*,—no floating ice having ever been known to reach *North Cape*,—on the other side of the Atlantic it travels upwards of 2,500 miles further south.

"The barrier of ice which may justly be supposed to exist between *Spitzbergen* and *Novaia Zemlia* during every summer, unquestionably presents obstacles to vessels penetrating northward, but there is no reason to consider these obstacles greater than those on the opposite American side in *Davis's Straits*, *Baffin's Bay*, *Lancaster Sound*, and *Barrow Straits*; and we have, moreover, the testimony of numerous whalers and other navigators in the *Greenland Sea*, that whenever they succeeded in pushing through this barrier of ice, they found to the north of it a sea more or less open and free from ice. A vessel, then, which, by watching for an opportunity, should effect a passage through this ice, would, no doubt, find itself in the great open navigable '*Polina*' of the Russians.

"The preceding remarks are offered to the attention of the reader, not as anything new, but as well established facts, which are submitted, by way of preparation, for the consideration of that portion of my views which I believe to be entirely new, and which, without further preface, I now humbly submit to public notice. My belief is, nay, I think I am able to demonstrate, that during the Arctic winter months, namely, from September to March, an entrance into the North Polar Sea through the opening under consideration, may be much more easily effected than during the summer months; and also, that the further navigation of the *Siberian Sea* may likewise be performed with much greater facility in winter than in summer.

"And here the principles which regulate the distribution of the gaseous and fluid coverings of the earth must, in the first instance, be brought to bear upon the subject. It admits of little doubt that some, at least, of the currents of the Arctic Ocean, are revolving currents, the direction of which is during the summer months from the pole to the south, and, in the winter months, the reverse. Our actual observations of this phenomenon are, unfortunately, very limited; but we know just enough to confirm the argument as far as it relates to the *Siberian Sea*. According to *Wrangell* and others, the current there during the summer runs from east to west; but in autumn, when the cold sets in, it changes, and proceeds from west to east. Now, if we take the compasses, and place one point of them on a polar chart, between *Lancaster Sound* and *Fury and Hecla Strait* (as a centre), and the other point on the *Faroe Islands*, and with the latter describe a circle to the northward, this circle will touch *North Cape*, the northern shores of *Novaia Zemlia*, *Cape Taimura* (the extreme northern point of Asia), the northern coasts of *New Siberia*, and *Behring's Straits*. And as we know that along the first portion of this line, from the *Faroe Islands* to *Novaia Zemlia*, and also along the last portion of it from *New Siberia* to *Behring's Straits*, the

current in the winter time flows in the direction from the Faroe to Behring's Straits, it is hardly possible that a counter current should exist in the intervening portion between *Novaia Zemlia* and *New Siberia*. Besides, the prime movers of the great Arctic current, which flows during summer from the Siberian coasts towards the Atlantic, namely, the Siberian rivers, are frozen during the winter, and have, consequently, no influence on the currents of the Siberian Sea. Hence there is every reason for concluding that this great Arctic current, bringing the drift ice from the Siberian shores, relaxes in its force by the end of summer, so that the gulf stream, which during spring and summer was checked and hemmed in by the ice between *Novaia Zemlia* and *Spitzbergen*, makes at last its way towards the Siberian coast, carrying with it whatever drift ice may have remained in that region, and actually clearing the way for an easy navigation.

"In corroboration of this result, an important physical fact relative to the distribution of temperature may be adduced. Taking the invaluable data of Professor Dove as a basis, I have laid down on twelve Polar charts the lines of equal temperature of every month in the year; and from a careful study of these lines, I have deduced the following remarkable conclusion:—There exists a moveable pole of cold, which in January is found on a line drawn from *Melville Island* to the mouth of the *River Lena*, and which gradually advances towards the Atlantic Ocean, till in July it is found on a line between *Fury and Hecla Strait* and *Novaia Zemlia*, whence, in the succeeding months of the year, it gradually recedes to its former position. It is clearly manifest that this movement of the temperature is occasioned by the direction of the currents and the presence of the Polar ice. The greatest mass of this ice is (it is scarcely necessary to say) formed where the winter cold is the greatest, namely, in the region of *New Siberia*, on the Asiatic side, and in that of Parry group on the American side; and when broken up and driven away into the Atlantic, masses of ice (as is well known) in their progress reduce the temperature wherever they go. Hence, in January and February, *Melville Island* and *Boothia Felix* are the coldest stations on record on the American side, being as much as 10° to 15° colder than *Igloodik* and *Winter Island*; whereas, in July, they are from 5° to 7° warmer than those places, owing to the ice having floated down in the direction of the latter. On the Asiatic side, the difference is still more striking. In January, the mean temperature along the north-eastern shores of *Siberia*, is from 40° to 50° lower than that of the western shores of *Novaia Zemlia*; while in July, it is as much as 20° higher. It must be borne in mind that Wrangell and Anjou, in their memorable expeditions, selected the most favourable of the winter months for their journeys over the ice, at a season when they hoped to find the ice most solid and of the greatest thickness. Nevertheless, they invariably found the 'wide immeasurable ocean' before them, at a comparatively short distance from the land; and this, too, to the north of what is actually the coldest region on the face of the earth. Now, it would be a monstrous anomaly, if at some distance to the west, where a warm current is known to prevail, and where the temperature is from 40° to 50° higher, we should not find the same 'wide immeasurable ocean.'

"I could adduce a number of facts from the evidence of the Russian surveyors and others strongly corroborative of these views, but refrain from doing so in deference to your space. But I think it important to refer briefly to what the well-known Norwegian naturalist Keilhau has informed us of with respect to the climate of *Beur* (called also *Cherry*) *Island*. This island is situated between *North Cape* and *Spitzbergen*, in the same latitude as *Melville Island*, and is exposed to the entire influence of the surrounding ocean. Keilhau tells us that in the year 1824, during the whole of the autumn and winter, the weather was mild, and at Christmas there was rain (this in the latitude of *Melville Island*, where the mercury is frozen during

five successive months). February was cold and clear, but the cold never too great for out-door work. On the 10th of that month, the sun was seen again for the first time, its disc just rising above the sea. In March the cold increased, especially with north-east wind. April was the coldest month of all, with northerly and north-easterly wind, the sea steaming and freezing all round the island. In the middle of that month, the cold was so severe, and the vapours from the sea so overpowering, that it was with the greatest difficulty they could venture into the open air. In May, irregular winds. In June, the prevalent wind was north-east, which brought with it a quantity of drift ice. On the 1st of July a great deal of drift ice came with the north-east wind, but the weather was clear and mild. Thus, we see that during the Arctic winter, when the sun was entirely below the horizon, the weather was exceedingly mild. From November till February not one instance is adduced of the winds coming from the north-east, but often from the south and south-west, with rain at Christmas. This warm wind would, of course, extend farther, precisely in the direction towards the *Siberian Sea*. But after the appearance of the sun, when the temperature of the whole Polar region would be raised, when the ice would begin to break loose, expand, and disperse to southerly latitudes, then it was that the north-east wind prevailed; and as this wind came from and brought with it the approaching ice masses, it would naturally lower the temperature gradually from February till April, when it attained the minimum. In June and July the drift ice itself had reached the island; but as the north-east wind now blew from the open sea behind the drift ice, it became mild. Nothing can be more strikingly illustrative of the moving pole of cold.

“ Lastly, I will adduce the direct and unimpeachable evidence of one who actually saw an open sea in winter to the north of *Novaia Zemlia*, namely, Willem Barentz. This able, bold, and honest seaman is the only one with his party who ever spent a winter on the northern shores of that island. Even on his first voyage, when he succeeded during the summer in tracing the coast of *Novaia Zemlia* as far north as *Icy Cape* (in 77 degrees of latitude according to his reckoning), where he was stopped by the ice, he came to this important conclusion, ‘We have assuredly found that the only and most hinderance to our voyage was the ice that we found about *Nova Zembla*, under 73 to 76 degrees; and not so much upon the sea betwene both the landes (viz., *Spitzbergen* and *Novaia Zemlia*), whereby it appeareth that not the nearnesse of the *North Pole* but the ice that commeth in and out from the *Tartarian Sea* about *Nova Zembla* caused us to feel the greatest cold. As soon as we made from the land, and put more into the sea, although it was much further northward, presently we felt more warmth.’ On the third and last of his remarkable voyages, Barentz made the land of *Novaia Zemlia* on the 7th of July 1596, and reached its north-east extremity on the 16th of August. They were, however, shortly afterwards beset by ice, and obliged to winter on the north coast of the island. While employed in erecting their hut, on the 26th of September, the wind came from the west, which drove the loose ice that was afloat away from the land, and left the sea open near the coast; of this, unfortunately, they could not take advantage, as the ship was considerably injured, and was besides imbedded in a closely-packed body of ice, so that she lay as if upon a firm and solid rock. On the whole, they suffered much less from the cold of the winter than they had anticipated, and so much snow fell during the winter that the Hollanders had almost every day to clear the entrance to their hut; a proof that open water could not have been far distant. On the 8th of March, after the appearance of the sun, the great open sea to the north began to be distinctly visible to Barentz and his party. In May they had got their two boats afloat, returning along the coasts to the south. At the commencement of this voyage in the open boats, Barentz, who had been declining in health, expired, believing, and with his last breath affirming, that, had he stood more between the two landes, he would have been able to enter the open sea.

"I cannot but think, then, that on the consideration of all the circumstances, it will be the opinion of those who are most competent to decide on the question, that an entrance into the Polar Basin through the opening under consideration, as well as the navigation of that 'wide immeasurable ocean', might be more easily effected during the Arctic winter than in the summer months. At all events, I respectfully beg to submit the point, together with the whole subject, to their serious consideration.

"It would ill become me to offer any suggestions as to the mode in which an expedition, if decided on, should be carried out; but I may, perhaps, be allowed to remark, that as regards the time of its departure, the remaining months of the present Arctic winter would seem preferable to the first months of the next, and this for two reasons:—First, a period from six to eight months would be gained, which under the urgent circumstances of the missing expedition may be of vital importance; secondly, vessels arriving in the Polar Sea in February or March, just before or when the sun has made its appearance, might, if only once able to enter the Polar Basin, easily traverse it to the opposite side before the power of the sun had set in motion the great ice-bearing current, and they would then have before them the whole summer in the fullest sunshine for carrying out the object of their voyage, namely, the search for Sir John Franklin.

"But even if a vessel could not be despatched till later in the year, the chances of an entrance through the opening under consideration may, after all, turn out to be greater than through any other opening, inasmuch as the former is the widest of all, as much as nine times wider than *Behring's Straits*. And as to the great masses of drift ice, we know that they do not present insurmountable obstacles in an extensive sea. The late Sir John Barrow said, 'Where ice can float, a vessel can float also.'

"Before concluding, I will merely give the distances, roughly stated, to the various points:—From *Woolwich* to the 80th parallel, midway between *Spitzbergen* and *Novaia Zemlia*, is as far as from *Woolwich* to *Cape Farewell*, the southern extremity of *Greenland*, or about 2,000 geographical miles. From the said midway point between *Spitzbergen* and *Novaia Zemlia* to the *Herald* and *Plover Islands*, north of *Behring's Straits*, is as far as from *Cape Farewell* to *Beechey Island*, at the entrance of *Wellington Channel*, or about 1,600 miles. The two distances together, namely, from *Woolwich* to the 80th parallel, and thence to the *Herald* and *Plover Islands*, are not more than that from *Woolwich* to *New York, U. S.*

"A screw-steamer, at the rate of five miles an hour, would, under ordinary circumstances, reach the 80th parallel between *Spitzbergen* and *Novaia Zemlia* in seventeen days.

"I have been under the necessity of confining my suggestions to the merest outlines, as a further developement would have extended my letter to an unreasonable length. But I shall be most happy to submit the whole of my data and charts to any one who may desire further explanation and detail."

"To the foregoing communication I beg now to add one observation as to the existence and nature of the barrier of ice said to stretch across the sea between *Spitzbergen* and *Novaia Zemlia* during summer. When I had recently the honour of a personal interview with you, you asked me what were my authorities on that subject. I now beg to state that it is my conviction that there is no really good authority decisive of the point; that in fact the passage between *Spitzbergen* and *Novaia Zemlia* has never yet been fairly attempted; and that, as is humbly suggested in my printed letter, the said opening into the Polar Basin may after all turn out to be the most favourable one even during the Arctic summer months.

"I beg to submit also two charts illustrative of my views, which I hope may facilitate the consideration of my letter.

"I have, etc.,

"Augustus Petermann."

Additional Facts.

Communicated in a Letter to Captain Mangles, R.N.

SIR,—In accordance with your request, I beg to submit to you some additional facts bearing on my paper on the Passage into the Arctic Basin between *Spitzbergen* and *Novaia Zemlia*, as offering probably the best route for the search after Sir John Franklin.

Since the publication of my paper, I have had the opportunity of perusing the full accounts of Admiral Lütke's voyages to the Arctic Ocean in the four consecutive years from 1821 to 1824, for the purpose of surveying the coasts of *Novaia Zemlia*. Of all voyages which have been undertaken in the direction of my proposed route, these form as yet the most authentic and important account of that part of the Arctic Ocean, but at the same time, it will readily be seen that they are, like the other attempts, insufficient to set at rest the question in *how far the drift ice between Spitzbergen and Novaia Zemlia offers obstructions to vessels*. The object, indeed, of Lütke's voyages, was the survey of the coasts of *Novaia Zemlia*. In the first year he traced its western coast as far as $74^{\circ} 45'$ N. lat., when he found its most northern parts quite free from ice; and on the 25th August, 1821, when he commenced to shape his course southward and return, he did not see any ice whatever to the north as far as his eye could reach. In the following year (1822), on the 11th August, he reached *Cape Nassau*, in lat. $76^{\circ} 35'$ north. At this prominent cape, where the coast rounds to the east, little ice was found at first, but it soon accumulated in such a manner as to render further progress difficult and hazardous. In the following year (1823) they reached the same cape on the 1st of August, and found the drift ice in nearly the same position. To vessels keeping close along the coast, this cape would certainly offer considerable obstacles in rounding it; here the elements, particularly the currents, are in perpetual conflict; a strong current from the south was observed by Lütke to be encountered by an easterly current, which brought the ice from the *Siberian* coasts, thence taking a direction towards *Spitzbergen*.

In his first three voyages, Lütke met with very little ice in the high sea as far as *Cape Nassau*; in his fourth and last, in which one of his instructions was to try what latitude he could attain in the open sea, he, unfortunately, encountered the ice in $75\frac{1}{2}^{\circ}$ north latitude. In this latitude he shaped his course to the west, keeping along the edge of the drift ice. When he had attained a westing of $43^{\circ} 49'$ east longitude in $76^{\circ} 5'$ north latitude, and still found the drift ice extending to the west, he abandoned his attempt and returned to *Archangel*.

It must be remembered, in the first place, that he devoted *only three days* to the whole attempt, namely, in sailing from the coast westward along the ice. A voyage of so short a duration, and in the most unfavourable of four consecutive seasons, with a vessel unsuitable for navigation among drift ice, is quite insufficient to decide the question. More unfavourable, however, than all this, must be regarded the time of the year in which Lütke made his voyages, namely, in the height of summer; his instructions being not to arrive at the coasts of *Novaia Zemlia* till late in July, when the land ice would have driven away from the coasts, allowing the approach of his vessel near enough for surveying purposes.

Now this time, namely the whole of our summer months, June, July, August, is precisely the time, as I have elsewhere endeavoured to show, when those seas are most encumbered with the floating ice which in the preceding months breaks loose from the *Siberian* coasts, and is driven away in that direction. These months, therefore, are the most unfavourable, whereas those of *March, April, and May*, are the most favourable for vessels proceeding in that direction; and there is no reasonable ground to doubt that a vessel in

those months will easily effect an entrance into the Arctic basin, pass *Novaia Zemlia*, *Cape Taimura*, and reach the *New Siberian Islands*, or the opposite side of the great '*Polynia*' of the Russians.

Professor Erman, the well-known explorer of Siberia, has published some remarks on Lieutenant Pim's projected expedition, which were brought home by that gentleman and presented to the Royal Geographical Society. In this pamphlet, Professor Erman quotes some exceedingly important facts and opinions of the late Hedenström, than whom no one probably has ever attained a more extensive knowledge of *Siberia*, and who published a work (in Russian) containing the results of his twenty years' residence and travels in that region. He occupied three years alone in a journey along the Arctic shores of *Siberia* and the *New Siberian Islands*, and is, indeed, the chief explorer of this group. He says, that to the north of these Islands the Polar Sea is open and free from ice. *It never freezes*, and even in March little drift ice is seen; and he expresses his belief that from these Islands, the opposite northern extremities of America and Greenland, as well as the North Pole itself, would be reached far more easily than from any other direction. There are also two excellent harbours in the *Island of Kotelnoi*, one of the group.

This evidence of one who must be regarded as our highest authority respecting the sea to the north of the *New Siberian Islands*, becomes much more important, when compared and combined with other facts. It will be recollected that Lieutenant Anjou, in his memorable ice journeys to the north of the same Islands during three consecutive years, was invariably arrested, at a very short distance from the land, by the open sea; he arrived at the conviction that all efforts to advance by the ice to any considerable distance from land, must prove unavailing, and offered to attempt the same object with a *boat*, to which, however, the Russian government refused their consent.

Respecting the state of the Polar Sea nearly due west from these Islands, namely, to the north of *Cape Taimura*, the northernmost cape of Asia, we have the very high testimony of Professor Middendorf, who states his belief that this cape, which he failed to reach by land, may be reached by sea. From the northernmost point which he attained, he described that *Cape*, and saw to the north of it *an open sea without a particle of ice*, and no iceblink in any direction. The unequivocal proof that the same part of the sea was in open communication with the Great *Polynia*, is the occurrence of fresh driftwood, consisting of larches, pines, and ash trees, which could only have come from the large Siberian Rivers. The tides, too (in *Taimyr Bay*), amounting to thirty-six feet, prove the connection of that bay with a large sea. Still further west we have the testimony of Barentz, Vlaming, the walrus-hunter Issakow, (who reached the north-eastern extremity of *Novaia Zemlia* in 1834,) and others, that there is an open sea to the north of that country.

To the north of *Spitzbergen*, we have the accounts of the numerous Dutch and other whalers that an open sea is frequently found there, and as pleasant to navigate as the '*sea of Amsterdam*;' and here I may remark, that I see no ground for entirely rejecting the old accounts of the Dutch having attained a very high latitude in those seas, even to within 1° of the Pole. The observations in those days, I readily acknowledge, were not so accurate as those of our own, and the instruments were very defective; but the great care in observing, the honesty and earnestness of purpose of those Dutch navigators, partly made up for such defects. Admiral Lütke bears high testimony to, and expresses his astonishment at, the surprising accuracy of Barentz's observations, made as far back as 1596, with insufficient instruments, and under the most unfavourable circumstances. The Dutch, it must be allowed, were not only among the most able and intelligent, but also among the most hardy and enduring of all navigators at that period. Willoughby, with the total of the crews of both his vessels, amounting to

65 souls, were frozen to death while wintering on the coasts of *Russian Lapland* (in lat. $68^{\circ} 15'$ north), in the year 1654; while Barentz, forty-three years later, passed a winter of more than eight months duration on the north-eastern coast of *Novaya Zemlya* (lat. 76° north), and of his whole crew, amounting to seventeen, only two died there.

But even if the early Dutch voyages to the north of *Spitzbergen* be altogether rejected, we have the evidence of more recent navigators, especially that of Sir E. Parry, who, indeed, started in the hope of finding solid ice, upon which to reach the North Pole in sledge-boats; and what did he find? This will best be seen by extracts from his work. On the 11th June, 1827, (in lat. $80^{\circ} 36'$) 'there was at this time much clear water to the N. and N.N.E.' In lat. $80^{\circ} 43'$, 'appearance of much clear water.' In $80^{\circ} 49'$, or one mile to the north of Phipps' furthest, nothing like the heavy or main ice could be seen. The highest latitude obtained by the vessel was $81^{\circ} 5' 32''$. All that could here be seen to the north (14th June) was loose drift ice. It appears, indeed, the higher they went, the less of the main ice they met with. To the N.E. it was particularly open. Page 44: 'We were much disappointed in seeing no indication of the main ice, so that although we were now twenty-five miles to the north of the station in which Phipps remarked that the 'ice appeared flat and unbroken', as seen from a considerable height on shore, all that we could discover was quite of a contrary description.' Page 47:—'Traces of reindeer were found on the *Seven Islands*; from here the sea to the north was observed to be perfectly clear.' In the memorable boat voyage, the following observations occur: 'It is a remarkable fact that we had already (26th June) experienced, in the course of this summer, more rain than during the whole of seven previous summers taken together, though passed in latitudes from 7° to 15° lower than this.' In another place: 'I had never before seen any rain in the Polar regions to be compared to this, which continued, without intermission, for twenty-one hours, sometimes falling with great violence and in large drops.' 16th July. A couple of small flies upon the ice; the general thickness of the floes of ice about half of that to the west of *Melville Island*. 17th July. Temperature 36° to 40° , one of the warmest and most pleasant days. At page 92 the weather is compared to an 'April day in England.' Such was the journey on a supposed solid body of ice, which had been conjectured to extend from *Spitzbergen* to the North Pole.

On the high authority of Sir E. Parry as to the immense amount of rain in that sea, as quoted in the above, it may reasonably be inferred that a much greater extent of open water is to be looked for in that quarter than in the region of his explorations of the seven preceding years in Arctic America, as such an amount of rain cannot come from either land or sea covered with ice and snow. It is important to observe that rain seemed to fall with all winds except W.S.W.; which is easily explained, as this wind came from the direction of *Greenland*.

The facts adduced in the foregoing,—and many more could be added,—derived as they are from high authorities, all tend to prove the existence of a very large Polar Sea, more or less open, and which extends to the north of nearly a half circle from the *New Siberian Islands* to *Spitzbergen*. There is no other part of the *Arctic Basin* where so high an authenticated latitude as $82^{\circ} 40'$ (probably $45'$) has been attained; and here the ice was only half the thickness of that at *Melville Island*. There is, indeed, as far as our actual knowledge goes, no other part of the *Arctic Basin* having anything like a sea so extensive and comparatively open as the one under consideration.

Captain Beaton, the propounder of the expedition through *Behring's Straits*, objects to my proposed route, from the difficulty of passing *Cape Taimura*, the northernmost cape of Asia. It is true the attempts of the Russians to round this cape have all failed; but this was partly owing to their keeping close to the shore, and thus coming in collision with the ice, and partly to the insufficiency of their boats. No one has ever tried to pass

this cape in the high sea to the north, and there is no ground whatever to suppose that this cape offers greater difficulties than the northern capes of *Spitzbergen*, which are about 3° nearer the Pole. Prominent capes like these, where the elements are turbulent, offer more or less difficulties in all zones. *Hakluyt's Headland*, the northwesternmost cape of *Spitzbergen*, is one of those difficult points, and has on that account been named '*Duyvels Hoek*' by the Dutch; but these difficulties are only experienced by vessels approaching too closely.

Some persons have attempted to ridicule my plan on account of the dark season. My proposition as to the best time of the year when a vessel should start, referred to February and March; and I stated distinctly, "vessels arriving in the Polar sea in February or March, just before or when the sun has made its appearance, might, if only once able to enter the Polar basin, easily traverse it to the opposite side before the power of the sun has set in motion the great icebearing current, and they would then have before them the whole summer in the fullest sunshine for carrying out the object of their voyage," &c. These persons must be ignorant of the fact, that the sun appears on the 80th parallel in February, and does not entirely disappear again till October: and they must also know little of the duration of twilight and the occurrence of the *Aurora Borealis*. The Norwegians, indeed, are out fishing in the *Spitzbergen* Sea till November, and commence in February, and their fishing probably extends to as high a latitude as my proposed route.

Others have asserted that the sea to the north of *Behring's Straits* was well known, and that the sea to the north of *Novaya Zemlia* and *Siberia* was quite the reverse. In the first place, I beg to differ from this assertion, inasmuch as I think the Russian navigators and explorers have not left us entirely ignorant of the latter region. Secondly, it is clear that to search for Sir John Franklin *effectually*, expeditions should not be limited to regions well known, but should also extend to those entirely unknown. And lastly, all we know of the sea to the north of *Behring's Straits*, and nearly as far as the *New Siberian Islands*, tends to show the existence of an extensive land, approaching the Asiatic continent sufficiently near to compress the sea into one of those narrow channels, which are well known to offer the greatest difficulties to Arctic navigation. Whereas, in the whole of the sea from *New Siberia* to *Spitzbergen*, everything tends to show the existence of a large Polar ocean, and the absence of land, in that region.

I am, in fine, greatly strengthened in my belief, since the publication of my first letter, that a steam vessel could easily, and within a few weeks, in the way and in the time I have proposed, reach the *New Siberian Islands*, which, according to Hedenström, our highest authority, form the most favourable starting-point, on the Asiatic side, for a voyage across the '*Polynia*' to the opposite northern extremities of America. On the other hand, it cannot be denied that eastwards of the *New Siberian Islands* to the north of the *Kolyma*, and as far as *Behring's Straits*, very little advance has been made in vessels since Cook, by either English or Russian navigators.

I have, etc.,

Augustus Petermann.

REASONS FOR INFERRING THE EXISTENCE OF A POLAR SEA.

BY LIEUT. MAURY, U.S.N.

"The process of reasoning by which I have arrived at the conclusion that there is probably an open sea near the region of the *Parry Islands*, has not been published. It is partly on well-known facts, and partly derived from the investigations carried on here with regard to the currents of the ocean.

"These are the facts and observations, stated briefly, upon which the conclusion is based. We have traced the *Gulf Stream* to the north of the *British Isles*, and thence around *North Cape* into the *Arctic Ocean*. We have traced a current from the *Pacific* at certain seasons of the year also, into the *Arctic Ocean*.

"Geographers have traced also into the same ocean immense bodies of fresh water that is carried to the Polar regions by the rivers of Northern Europe, Asia, and America.

"We have also made the existence of the fact to appear probable, that the amount of precipitation over the *Arctic Ocean* is greater than the evaporation, and that all of these facts go to show, that there is a large balance of water in that sea always in motion, and which finds its escape through *Davis Strait* and *Baffin Bay* into the *Atlantic Ocean*.

"The ice has been observed generally when it breaks up, to press against the north part of this continent;* it therefore commences to break up first from the north; whence we infer that it has been warmer at the north.

"The birds and beasts are also found to migrate to the north. These are two facts which go to induce the belief that there is a climate milder than that about *Mackenzie River*, farther to the north; and the presence there of large quantities of water in a fluid instead of a solid state, would tend to make such a difference of climate.

"That the water in motion must be for the most part in a fluid state is clear, and that along the northern shores of this continent it is not in a fluid state for much of the year is also clear; and as the *Baffin Bay* current is always in motion, the conclusion has been forced upon me that the water which comes from around *North Cape* through *Behring Strait*, and down the rivers of Europe and Asia into the *Arctic Basin*, probably passes along to the north of *Parry Islands* on its way out into *Baffin Bay*.

"M. F. Maury.

"*Nautical Observatory, Washington, July 1850.*"

CAPTAIN FITZJAMES'S JOURNAL.

(*From the Nautical Magazine and Leader.*)

"*Her Majesty's ship EREBUS, at sea,*

"*June 8, 1845, Ten p.m.*

"—— You appeared very anxious that I should keep a journal for your especial perusal. Now, I do keep a journal, such as it is, which will be given to the Admiralty; but, to please you, I shall note down from time to time such things as may strike me, either in the form of a letter, or in any other form that may at the time suit my fancy. I shall probably never read over what I may have written, so you will excuse inaccuracies.

"I commence to-night, because I am in a good humour. Every one is shaking hands with him self. We have a fair wind, actually going seven knots, sea tolerably smooth, though we do roll a little; but this ship has the happy facility of being very steady below, while on deck she appears to be plunging and rolling greatly. Our lat. is now about $60^{\circ} 0'$, long. $9^{\circ} 30'$, so you will find out our 'whereabouts'. The steamers *RATLER* and *BLAZER* left us at noon yesterday, near the island of *Rona*, seventy or eighty miles from *Stromness*. Their captains came on board and took our letters; one from me will have told you of our doings up to that time. There was a heavy swell and wind from north-west; but it began veering to west and south-west, which is fair.

* America.

The steamers then ranged alongside us, one on each side, as close as possible without touching, and, with the whole force of lungs of officers and men, gave us, not three, but a prolongation of cheers, to which, of course, we responded. Having done the same to the *TERROR*, away they went, and in an hour or two were out of sight, leaving us with an old gull or two and the rocky *Rona* to look at; and then was the time to see if any one flinched from the undertaking. Every one's cry was, 'Now we are off at last!' No lingering look was cast behind. We drank Lady Franklin's health at the old gentleman's table, and, it being his daughter's birth-day, hers too. But the wind, which had become fair as the steamers left (as if to give the latest, best news of us), in the evening became foul from north-west, and we were going northward instead of westward. The sky was clear, the air bracing and exhilarating. I had a slight attack of aguish headache the evening before, but am now clear-headed, and I went to bed thinking of you and dear —, whose portrait is now looking at me; for I am writing at the little table you will see in the *Illustrated News*—only you must imagine that the said table is three feet long, or from the bed to the door, and the picture just looking down at me.

"This morning we began to have a fair wind; before the day was half over it was right aft. The *TERROR* is coming after us, the transport sailing close to us with as little sail as possible, for she could run us out of sight if she chose; they fear the ice, doubtless, not being built to shake it away. In our mess we have the following, whom I shall probably from time to time give you descriptions of:—First Lieutenant, Gore; second, Le Vescomte; third, Fairholme; purser, Osmar; surgeon, Stanley; assistant-surgeon, Goodsir; ice-master (so called), Reid; mates,—Sargent, Des Vœux, Couch; second master, Collins; commander, you know better than he does himself.

"The most original character of all—rough, intelligent, unpolished, with a broad north-country accent, but not vulgar, good humoured, and honest hearted—is Reid, a Greenland whaler, native of *Aberdeen*, who has commanded whaling vessels, and amuses us with his quaint remarks and descriptions of the ice, catching whales, etc. For instance, he just said to me, on my saying we should soon be off *Cape Farewell*, at this rate, and asking if one might not generally expect a gale off it (*Cape Farewell* being the south point of *Greenland*), 'Ah! now, Mister Jems, we'll be having the weather fine, sir! fine! No ice at all about it, sir, unless it be the bergs—ah! the ice'll be gone, sir, only the bergs, which I like to see. Let it come on to blow, look out for a big'un. Get under his lee, and hold on to him fast, sir, fast. If he drifts near the land, why, he grounds afore you do.' The idea of all the ice being gone, except the icebergs, is racy beyond description. I have just had a game of chess with the purser Osmar, who is delightful. He was with Beechey in the *Blossom*, when they went to *Behring Straits* to look out for Franklin, at the time he surveyed the north coast of America, and got within 150 miles of him; he was at *Petro Paulowski*, in *Kamschatka*, where I hope to go, and served since on the lakes of Canada. I was at first inclined to think he was a stupid old man, because he had a chin and took snuff; but he is as merry-hearted as any young man, full of quaint dry sayings, always good humoured, always laughing, never a bore, takes his 'pinch after dinner', plays a 'rubber', and beats me at chess—and, he is a gentleman.

"The second master Collins is the very essence of good nature, and I may say good humour. And now, good night, it is past eleven o'clock. I have written without stopping, all with the porcupine quill. God bless you!

"6th.—To-day Sir John Franklin showed me such part of his instructions as related to the main purposes of our voyage, and the necessity of observing everything from a flea to a whale in the unknown regions we are to visit. He also told me I was especially charged with the magnetic observations. He then told all the officers that he was desired to claim all their remarks,

journals, sketches, etc., on our return to England, and read us some part of his instructions to the officers of the *TRENT*, the first vessel he commanded, in 1818, with Captain Buchan, on an attempt to reach the *North Pole*, pointing out how desirable it is to note everything, and give one's individual opinion on it. He spoke delightfully of the zealous co-operation he expected from all, and his desire to do full justice to the exertions of each.

"To-day has been a gloomy day, as far as sunshine is concerned, and the wind has drawn round to the northward, though so little of it, that the old *EREBUS* cannot keep her head the right way, or, as we term it, she 'falls off', with the roll of the sea. Seven or eight large grampuses came shooting past us to the south-west, which Mr. Goodsir declared were delightful animals. Last evening a shoal of porpoises were bounding about the bows of the vessel as she plunged into the sea, and a bird called a mullimauk, a sort of petrel, which the Arctic people look for as a sign of going toward the icy regions.

"At dinner to-day Sir John gave us a pleasant account of his expectations of being able to get through the ice on the coast of America, and his disbelief in the idea that there is open sea to the northward. He also said he believed it to be possible to reach the *Pole* over the ice by wintering at *Spitzbergen*, and going in the spring before the ice broke up and drifted to the south, as it did with Parry on it.

"Towards midnight.—I can't make out why Scotchmen just caught always speak in a low, hesitating, monotonous tone of voice, which is not at all times to be understood—this is, I believe, called 'cannyness'. Mr. Goodsir is 'canny'. He is long and strait, and walks upright on his toes, with his hands tucked up in each jacket pocket. He is perfectly good humoured, very well informed on general points, in natural history learned, was Curator of the Edinburgh Museum, appears to be about twenty-eight years of age, laughs delightfully, cannot be in a passion, is enthusiastic about all 'ologies, draws the insides of microscopic animals with an imaginary-pointed pencil, catches phenomena in a bucket, looks at the thermometer and every other meter, is a pleasant companion, and an acquisition to the mess. So much for Mr. Goodsir.

"7th. 11 P.M.—Pitching heavily, breeze increasing from W.N.W. It came on as the sun was thinking of setting, about nine, in the form of a bank, behind which he vanished; it then rose in the form of an arch, and I expected wind; but, having overspread the sky, it settled into a steadily increasing breeze. Barometer rising as rapidly as it fell, and I have been prognosticating a sort of gale in consequence. It was calm all last night, cloudy all to-day. Passed the day in working and making observations, when the sun did peep out, with Le Vescomte. There is nothing in this day's journal that will interest or amuse you, at all events, and I am not in a humour for describing any more messmates.

"8th.—I like a man who is in earnest. Sir John Franklin read the church service to-day and a sermon so very beautifully, that I defy any man not to feel the force of what he would convey. The first Sunday he read was a day or two before we sailed, when Lady Franklin, his daughter, and niece attended. Every one was struck with his extreme earnestness of manner, evidently proceeding from real conviction. We had a heavy sea and stiff breeze to-day; but it moderated at four o'clock, and the sun came out clear and beautiful. In latitude 62°, at nine o'clock this evening, we tacked (if you know what it is), and stood to the south-west. We saw a ship from *Peterhead* to-day.

"10th.—I was beginning to write last night, but the ship was tumbling about to such an extent that I went to bed, and had to turn out again immediately and get the top-sails reefed, as it blew very hard in squalls. The ship pitched about as much as I ever saw any vessel, but still very easily. Reid says he does not like to see the wind 'seeking a corner to blow into'. I worked observations all yesterday, and to-day took several on deck. The

weather moderated this morning, and all day we have had little wind and tolerably smooth sea. A clear, fine sunset at a quarter to ten, and Goodsir examining 'mollusca', in a microscope. He is in ecstasies about a bag full of blubber-like stuff, which he has just hauled up in a net, and which turns out to be whales' food and other animals. I have been reading Sir John Franklin's vindication of his government of Van Diemen's Land, which was to come out a week or two after we sailed. He had ready all the sheets, and cuts up Lord Stanley *a few*, and says he is haughty and imperious.

"Here ends, I find, my third sheet; so if you don't like your letter thus far, pray don't read the following which I *intend* to write. There is nothing to interest you now, and we are not far on our journey, so I wind up this and call it a letter, just for the sake of adding that I am, as ever, yours, etc.

"More of the 10th.—Couch is a little, black-haired, smooth-faced fellow—good humoured in his own way; writes, reads, works, draws, all quietly. Is never in the way of anybody, and always ready when wanted; but I can find no remarkable point in his character, except, perhaps, that he is, I should think, obstinate. Stanley, the surgeon, I knew in China. He was in the CORNWALLIS a short time, where he worked very hard in his vocation. Is rather inclined to be good-looking, but fat, with jet black hair, very white hands, which are always abominably clean, and the shirt sleeves tucked up; giving one unpleasant ideas that he would not mind cutting one's leg off immediately—'if not sooner'. He is thoroughly good-natured and obliging, and very attentive to our mess. Le Vescomte you know. He improves, if possible, on closer acquaintance. Fairholme, you know or have seen, is a smart, agreeable companion, and a well informed man. Sargent, a nice, pleasant-looking lad, very good-natured. Des Vœux I knew in the CORNWALLIS. He went out in her to join the ENDYMION, and was then a mere boy. He is now a most unexceptionable, clever, agreeable, light-hearted, obliging young fellow, and a great favourite of Hodgson's, which is much in his favour besides.

"Graham Gore, the first lieutenant, a man of great stability of character, a very good officer, and the sweetest of tempers, is not so much a man of the world as Fairholme or Des Vœux, is more of Le Vescomte's style, without his shyness. He plays the flute dreadfully well, draws sometimes very well, sometimes very badly, but is altogether a capital fellow.

"Here ends my catalogue. I don't know whether I have managed to convey an impression of our mess, and you know me sufficiently to be sure that I mention their little faults, failings, and peculiarities in all charity. I wish I could, however, convey to you a just idea of the immense stock of good feeling, good humour, and real kindness of heart in our small mess. We are very happy, and very fond of Sir John Franklin, who improves very much as we come to know more of him. He is anything but nervous or fidgety; in fact, I should say remarkable for energetic decision in sudden emergencies; but I should think he might be easily persuaded where he has not already formed a strong opinion.

"Our men are all fine, hearty fellows, mostly north-countrymen, with a few man-of-war's men. We feared at *Stromness* that some of them would repent, and it is usual to allow no leave—the TERROR did not. But two men wanted to see—one his wife whom he had not seen for four years, and the other his mother, whom he had not seen for seventeen—so I let them go to *Kirkwall*, fourteen miles off. I also allowed a man of each mess to go on shore for provisions. They all came on board to their leave; but finding we were not going to sea till the following morning, four men (who probably had taken a *little* too much whiskey, among them was the little old man who had not seen his wife for four years) took a small boat that lay alongside and went on shore without leave. Their absence was soon discovered, and Fairholme, assisted by Baillie, and somebody or other, brought all on board by three o'clock in the morning. I firmly believe each intended coming on board

(if he had been sober enough), especially the poor man with the wife—but, according to the rules of the service, these men should have been severely punished—one method being to stop their pay and give it to the constables, or others, who apprehended them. It struck me, however, that the punishment is intended to prevent misconduct in others, and not to revenge their individual misconduct—men know very well when they are in the wrong—and there is clearly no chance of any repetition of the offence until we get to *Valparaiso*, or the *Sandwich Islands*; so I got up at four o'clock, had everybody on deck, sent Gore and the Sergeant of marines below, and searched the whole deck for spirits, which were thrown overboard. This took two good hours; soon after which we up anchor, and made sail out. I said nothing to any of them. They evidently expected a rowing, and the old man with the wife looked very sheepish, and would not look me in the face; but nothing more was said, and the men have behaved not a bit the worse ever since. I don't know why I tell you all this. I meant to go to bed when I finished the other sheet; but went to look at some beautiful specimens of crustaceous animals in the microscope, one of which, about a quarter of an inch long, is an entirely *new* animal, and has a peacock's tail. Goodsir is drawing it. And now I must really say good night; it is past one o'clock.

"11th and 12th.—All yesterday it blew very hard, with so much sea that we shipped one or two over the quarter-deck, by which I got a good drenching once. The sea is of the most perfect transparency—a beautiful, delicate, cold-looking green, or ultramarine. Long rollers, as if carved out of the essence of glass bottles, came rolling towards us; now and then topped with a beautiful pot-of-porter-looking head. At sunset the wind moderated, and was calm at night. This morning a fair wind until four o'clock, P.M., when thick fogs blew over at last, and settled this evening into a strong northerly breeze (fair for us), by which we are going on at a good rate, with another sea getting up in an opposite direction to the last, and between the two we are rolling somewhat. We are now only six miles from *Iceland*—south of it.

"14th.—Yesterday evening the sea went down much, and the wind became very light. This morning the wind was quite fair, having been so more or less all night; but instead of having clear weather as with the north-east wind, it came to south-east, and brought hard rain and thick fogs all day. We are now, however, (eleven P.M.), going seven knots and a quarter in a thick fog, with the Terror on one side and transport on the other, keeping close for fear of losing sight of us. To-day we arranged all our books in the mess, and find that we have a very capital library. Reid still amuses us. He has just told me how to boil salt fish when it is very salt. He saw the steward towing it overboard, and roared out:—'What are you making faces at there? That's not the way to get the *sarlt* oout.' It appears, that when it boils it is to be taken off the fire and kept just not boiling. This is Saturday night. Reid and Osmar are drinking 'Sweethearts and wives;' and they wanted me to join. I said I had not the one, and did not want the other. Good night.

"—— Nothing has been written for you these last few days—not because I had nothing to say, or did not think of you, but because I have had plenty to do in the writing and calculating way; and because, just as I was beginning to get paper and ink ready, I found I was in bed, and fell asleep. To-day is 'Waterloo-day', and we drank the Duke's health at Sir John's table. There was a talk before we left England of a brevet on this day; if this be true, I think it more than probable that I shall get the rank of captain. With this idea, I took a glass of brandy and water at ten o'clock, which, allowing for difference of longitude, answers to half-past seven in London, and drank your health, in petto—fancying you might be drinking wine. In fact, we took an imaginary glass of wine together, and I don't care

how soon we may take a real one. Now I am laughing, for Reid has just said, scratching his head, 'Why, mister Jems, you never seem to me to sleep at all; you're always writin!' I tell him that when I do sleep, I do twice as much as other people in the same time. Now for the journal.

"15th.—Wind fair and strong, with a high sea; but we carried on much sail, heeling over much; and we actually fancy we went nine knots. In the evening it moderated, and the weather was clear and cool.

"16th.—Calm day, sea glassy smooth, cloudy weather, no sun. After breakfast I went on board the *TERROR*, to see Captain Crozier about my 'Fox' observations (Fox being a dipping-needle invented by him). Fairholme and Le Vescomte followed in the India-rubber boat, which was being tried when you came to *Woolwich*. Crozier and Little, first lieutenant, and Lieutenant Griffiths, the agent for transport, dined on board with Sir John.

"17th.—The sun shone out, and we had a smooth day; air cold. Since the 11th, the thermometer on deck in the shade has never been above 50 degrees or below 45 degrees, night or day; generally 46 degrees or 48 degrees. At night cloudy, with a bright light on the horizon to the north-east, which Gore says is *Aurora Borealis*. Reid calls it 'ice-blink.' I say it is the reflection of sunset, though it is north-east. It looks like a large town on fire, twenty miles off.

"To-day (18th) we set to work, and got a catalogue made of all our books, and find we have, amongst us, a most splendid collection. The 'crow's-nest' is up—which is unusually a cask lined with canvas—at the fore-top-mast-head, for a man to stand in to look out for channels in the ice. With us, it is a sort of canvass cylinder, hooped, and is at the main-top-gallant-mast-head (if you know where that is). Reid, who will have the peculiar privilege of being perched up there, says it is a very expensive one.

"19th.—Twelve o'clock at night. I suppose we are 140 or 150 miles from *Cape Farewell*. Blowing hard, but not a rough sea, although there is a swell. When I say hard, I mean fresh; we can carry much sail, and do. I can scarcely manage to get Sir John to shorten sail at all. Still cloudy. At half-past ten, a bright light appeared in the north-west, which was set down as *Aurora*, but turned out really to be the reflection of sunset. The clouds and mist moved off as if a blanket were being withdrawn, leaving an orange-coloured clearness underneath in the form of an arch, with a well-defined dark horizon, which clearness turned out to be a real clear sky, cold looking and fine; and now the officer of the watch comes to tell me the wind is lighter, and we certainly are quieter. 'Shake a reef out, set the fore-top-gallant-sail' (the main being set). 'Call me at six if anything happens.' Good night, good night!

"24th.—In *Davis Straits*. *Cape Desolation* at noon to-day, bearing east ninety miles, but we can't see it. We have just done with a glorious gale of wind, which has been sending us on in grand style. I wrote last on Thursday night, and shall sum up from thence. On Friday, the 20th (and Thursday night also, though I did go to bed so quietly) we kicked and plunged and danced in a tremendous manner, the sea running all manner of ways; the day was nearly calm, with a very heavy swell, the ship rolling deeply. A number of 'bottle noses,' a species of whale, about twenty-eight feet long, came dancing about us; their head is very peculiar, and unless they are very close, so as to see their beak under water, one fancies their foreheads are snouts poked up above the water. All this night we jumped and danced again with a strong breeze dead foul for us, which at midnight had turned into a complete gale; the air cold, though the thermometer stood fixed at 42 degrees. On Saturday calm again, and smooth water. Molimaules, and trees with the bark rubbed off by ice, floating about. Sir John at dinner; most amusing with anecdotes of an Indian chief, whom he met in the journey in which he suffered so much—named, I think, Akatcho, who appears to have been a fine character.

"*Sunday, 22nd*.—It began to blow hard suddenly at seven in the morning from east (you must recollect that our course is westerly). We struggled through the church service on the lower deck, the ships rolling and tumbling much, the sea curling astern beautifully.

"*Yesterday, 23rd*.—We had the highest sea I ever saw; it was very fine. I know nothing finer than a gale of wind, particularly when you are running before it. We had a few seas on our decks, one of which found its way down on to our table, just as we had done dinner. I dined at our mess to-day, Sir John finding his guests could not hold on and eat too. We are packed close, and can't move very far. But the good humour of every one is perfect; and we do dance before it so finely—I mean before the wind. It rained hard all yesterday and all night; and this morning a glorious sun and a clear blue air, sent us all up to dry ourselves and our clothes. We have gradually altered our course, and are now steering due north. At noon to-day *Cape Desolation* was due east ninety miles, so we are in *Davis Straits*. The sea is now moderately smooth, and the wind still fair. I am writing this at half-past ten, in broad daylight. Sir John says, that in his voyage to *Hudson's Bay*, he passed the very spot we were on yesterday, and was sailing through ice. We have not yet seen ice or land. The sea is beginning to get colder. The air still at 41° , but to-day it felt delightfully cold. The monkey has, however, just put on a blanket, frock, and trowsers, which the sailors have made him (or rather her), so I suppose it is getting cold. Adieu for the present.

"*Wednesday, 25th*.—At one this morning, I was on deck looking at the west coast of *Greenland* and an iceberg, although the land was forty miles off, and the berg six or eight. We sailed along it before the wind until noon, and the thermometer, when I went on deck, had gone down to 39° , though it still keeps at 42° in the day. The coast of *Greenland* looks rugged, and sparkling with snow, the shadows and ravines forming deep black marks; we regret not being a little nearer to see it better. This morning, one snowy iceberg was to be seen a long way off. I am now writing, 11 P.M., lat. 63° , near about a place marked on the chart as *Lichtenfels*. The sea, as the sun set half an hour ago, was of the most delicate blue in the shadows; perfectly calm—so calm, that the *TERROR's* mast-heads are reflected close alongside, though she is half a mile off. The air is delightfully cool and bracing, and everybody is in good humour, either with himself or his neighbours. I have been on deck all day, taking observations. Goodsir is catching the most extraordinary animals in a net, and is in ecstasies. Gore and Des Vœux are over the side, poking with nets and long poles, with cigars in their mouths, and Omar laughing; he is really an original, and a delightfully dry fellow. I am very sleepy and tired, but did not like to go to bed without writing on the first day on which we have seen Arctic land. Reid says, 'We shall soon see the *Huskimays*,' which he says are vulgarly called 'Yacks' by the whalers, and 'Huski's' for shortness.

"*26th*.—A delightful day we have had; quite calm; hot sun. Thermometer 42° . All sorts of beasts being caught in nets. We take turn to fish with a net at the end of a long pole, and bring up most strange animals. Crozier dined on board, and Hodgson came, looking very ill. We saw several icebergs a long way off, which we hoped would come near us; the scenery and rugged peaks of *Greenland* twenty miles off.

"*27th*.—To-day has been hot and calm and delightful; got bottom in forty fathoms, and pulled up starfish and shells and strange beasts, and, what is better, pulled up plenty of large codfish—enough for a good feed or two for all hands. This afternoon a thick fog suddenly came over us, with a north wind, in which the thermometer fell to 35° , where it now stands, and we are sailing in smooth water, and small whales bounding about in all directions. Latitude, 64° . The fog has cleared away, and we have lost the transport. This morning a brig came close to us, and her skipper came on board—a rough old fellow, from *Shelland*. He has come to fish for cod on the banks,

and for salmon in the 'Florida'—a new scheme quite in these parts. He came to see the little old man who had the wife at *Stromness*, who had been a mate with him.

"29th.—To-day we have had sea smooth as glass, very cloudy, and a cold air. Thermometer, 35°; and, to my delight, passed several icebergs, within a mile of a large one. The effect was very fine, for the horizon happened to be a dark distinct line; and these bergs, catching an occasional gleam of sunshine, shone like a twelfth cake. I had fancied icebergs were large transparent lumps, or rocks of ice. They look like huge masses of pure snow, furrowed with caverns and dark ravines. I went on board the *TERROR* in the evening, for it was quite calm, and found Hodgson better. When we came on board, we pulled up for Goodsir beasts, star-fish, mud, and shells, from a depth of 250 fathoms, and caught more cod. Last night I remained up till a late hour, trying to read a watch by the light of certain blubbers, remarkable jelly-like fish, which emit a bright phosphorescent light when shaken in a basin. Land in sight, under dense masses of clouds. We have found the transport, and a Danish brig is close to us.

"30th.—The coast of *Greenland* is now very fine. We are nearer than ever—about twenty-five miles—but it looks close, and dense clouds overhang the whole rugged and snowy coast. I saw several glaciers to-day, but the clouds were too dense to sketch anything, though the effect is very fine of the masses of cloud and snow, relieved by dark blue craigs. To-day, at six o'clock in the evening, we crossed the Arctic circle, latitude 66° 30', and the sun's declination happening to be more than 23° 10', he will not set to us to-night at all. I regret that it is too cloudy to see him at midnight. This evening, sea smooth; no icebergs.

"July 1st.—To-morrow we expect to get to *Disco*, or, rather, to the *Whale-fish Islands* close to it, where we shall unload the transport of provisions and coals, and start as soon as we can. I shall, therefore, continue my journal up to the present time; and if you hear nothing more from me, you must be satisfied that we have arrived at *Disco*, and are gone on in prosecution of our journey.

"This morning was damp and foggy, but it cleared away, and we are now sailing with the dark blue land on our right, twenty miles off, relieved by snowy peaks, and a line of craggy icebergs, as far as the eye can reach ahead. In a few hours we shall be among them. I have just been up in the crow's nest, and the appearance of these icy craigs and pinnacles, is beautiful and singular; far in, close to the land, is a perfect glacier, equal to any Swiss one. Still, on we go—on, on—the three of us, though the transport wishes herself back again, no doubt. This evening we sailed in among a shoal of some hundred walrusses, tumbling over one another, diving and splashing with their fins and tails, and looking at us with their grim, solemn-looking countenances and small heads, bewiskered and betusked. There are sixty-five icebergs in sight.

"In talking to Sir John Franklin, whose memory is as good as his judgment appears to be correct, it appears that one great difficulty is to get from where we are to *Lancaster Sound*. Parry was fortunate enough, in his first voyage, to sail right across in nine or ten days—a thing unheard of before or since. In his next voyage he was fifty-four days toiling through fields of ice, and did not get in till September, yet *Lancaster Sound* is the point we look to as the beginning of our work. If we are fortunate we shall be there by the 1st of August, which will be time enough; sooner would probably put us among the clearing ice. No expedition has ever been able to leave *Disco* before the 4th or 5th of July, though some have sailed a month before we did; except Ross, in his first voyage, and he got away by the 16th of June, and was, I believe, a month going sixty miles further. So you see all is conjecture; we may do well this year, and, again, we may not.



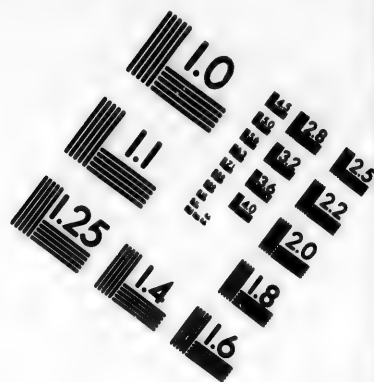
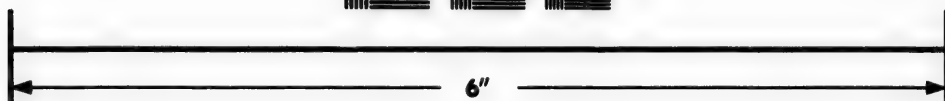
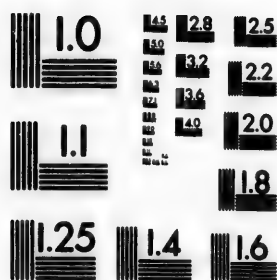


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"*Midnight, 1st.*—I have just been on deck to look again at the splendid icebergs we were passing through, and saw one about 200 feet high topple over and come down with a crash, which raised a cloud of foam and spray and mist like an avalanche. It is a fine, clear, sunshiny night; the Danish brig is closer in-shore, occasionally hidden from our view by a berg; 180 were in sight at one time.

"*2nd.*—The weather was so thick, that we could not see when we had gone far enough, but found ourselves in the forenoon right under a dense, black-looking coast topped with snow, with long furrows and ravines of snow, and canopied with a mass of clouds and mist. In bold relief, at the foot of this black mass, the most fantastically formed and perfectly white bergs shone out. This was *Disco*, and we showed our colours to the Danish flag, hoisted on the house or hut of the Governor of the Danish settlement, called *Lievely*, near its south end. We are now beating up to *Whale-fish Islands*, which are in the bay, formed by the south end of *Disco* and the main land, where we clear the transport, etc., and shall probably be in to-morrow morning early, as we are now (ten P.M.) eighteen miles from them. The scenery is grand, but desolate, beyond expression. I could not help thinking of the Frenchman who, after a long account of the misery of the rain and fogs of England, wound up with—'Pour quitter ce triste sol je m'embarque à Liverpool.' Osmar has just come from on deck (midnight), and is dancing with an imaginary skipping-rope. I said to him, 'What a happy fellow you are, always in good humour.' His answer is, 'Well, sir, if I am not happy here, I don't know where else I could be.' Reid says we shall see the 'Huskimays' to-morrow morning.

"*July 3rd.*—This morning, instead of going into *Whale-fish Islands*, by some mistake, Reid fancied we were wrong, and away we went up to the end of the bay, thirty miles, to the mouth of the *Waigat Channel*, looking for them—the bay full of the most glorious icebergs, packed close along the shore. At noon we found out our mistake, and had our sail for nothing, which would be good fun but for the delay. I went on board the *TERROR* in the evening, and found Captain Crozier knew the mistake, but fancied we had given up the idea of going there. Fortunately, the wind favoured us right round the bay, and we had a delightful sail. We are now running into these *Whale-fish Islands*.

"*4th, evening.*—You will bear in mind that all this time the sun is up. Finding ourselves at last off these rocky islands, we sent *Le Vescomte* in the gig to reconnoitre, as Captain Crozier, who had been here some years ago, did not recognize the place—a certain flag-staff on a hill having been carried away. Very soon out paddled five 'Huskimays', in the smallest possible canoes, all in a row, and two going a-head kept near the ship, and piloted her into a safe place among the rocks, where we are now moored in a channel just four times the ship's length in breadth, and perfectly land-locked. I was ashore all day on *Boat Island*, observing, with 'Fox', and got very wet and cold; but plunging into cold water, when I got on board, made me quite warm.

"*Sunday, 6th.*—A fine sunshiny night, and we had a delightful sunshiny day, quite warm, the air clear, ice glistening in all directions. The fine bold land of *Disco*, black, and topped with snow—clear—the sea covered with bits of ice, which are rushing through the channel as they break from the icebergs, which fall with a noise like thunder. Every man nearly on shore, running about for a sort of holiday, getting eider ducks' eggs, etc.; curious mosses and plants being collected, as also shells. *Le Vescomte* and I on the island since six this morning, surveying. It is very satisfactory to me that he takes to surveying, as I said he would. Sir John is much pleased with him. All yesterday I was on the island with Fairholme, with the dipping-needle. We have a little square wooden house to cover ourselves. Very large mosquitoes biting us. I shall send you one. The transport will probably be cleared to-morrow evening or Tuesday, and shall get off on Wed-

nesday evening or Thursday; that is, the 9th or 10th—and hard work too. A man just come over from *Lievelly*, a Dane, who has married an Esquimaux, says that they believe it to be one of the mildest seasons and earliest summers ever known, and that the ice is clear away from this to *Lancaster Sound*. Keep this to yourself, for Sir John is naturally very anxious that people in England should not be too sanguine about the season. Besides, the papers would have all sorts of stories, not true. I do believe we have a good chance of getting through this year, if it is to be done at all; but I hope we shall not, as I want to have a winter for magnetic observations. And now here goes a new pen into the porcupine, to say that your journal is at an end, at least for the present. I do hope it has amused you, but I fear not; for what can there be in an old tub like this, with a parcel of sea bears, to amuse a 'lady fair'. This, however, is a *façon de parler*, for I think, in reality, that you will have been amused in some parts and interested in others, but I shall not read back, for fear of not liking it, and tearing it up."

TO WILLIAM CONINGHAM, Esq.

"*Whale-fish Islands*, 11th July, 1845.

"DEAR CONINGHAM,—E——'s bundle of yarns will show you that I am well and happy, and have not forgotten you yet. I have not much time, as the transport sails to-morrow evening, and we shall be all day at work. It was a heavy job, clearing the transport, and took us longer than we imagined it would have done, though we worked from four till six. We are now full—very—having three years' provisions and coals, besides the engine. The deck is covered with coals and casks, leaving a small passage fore and aft, and we are very deep in the water. We sail, if possible, to-morrow night, and hope to get to *Lancaster Sound* by the 1st of August, which, however, is a lottery. It is now eleven o'clock, and the sun shines brightly above the snowy peaks of *Disco*. From the top of one of the islands, the other day, I counted 280 icebergs, and beautiful objects they are. Should you hear nothing till next June, send a letter, *via Petersburg*, to *Petro Paulowski*, in *Kamachatka*, where Osmar was in the *Blossom*, and had letters from England in three months. And now God bless you, and everything belonging to you.

"Always your affectionate

"James Fitzjames."

MRS. BLENKY'S LETTER TO THE "MORNING HERALD"

"SIR,—Knowing the interest which is now felt in the question of Sir John Franklin's long absence, I venture to offer you, for publication in the *Morning Herald*, an extract from the last letter I received from my husband, who is ice-master on board the *TERROR*, which will show that they looked forward to the possibility of being detained much longer than had been generally supposed.

"I may state that my husband was previously out with Sir John Ross in the *VICTORY*, when they were so many years missing. The letter was written on board the *TERROR*, at *Disco Island*, and is dated July 12, 1845. He says:—'The season is a very open one, much such an one as when we came out with Captain Ross. We are all in good health and spirits, one and all appearing to be of the same determination, that is, to persevere in making a passage to the north-west. Should we not be at home in the fall of 1848, or early in the spring of 1849, you may anticipate that we have made the passage, or likely to do so; and if so, it may be from five to six years,—it might be into the seventh,—ere we return; and should it be so, do not allow any person to dishearten you on the length of our absence, but look forward with hope that Providence will at length of time restore us safely to you.'

"I am, etc.,

"*Esther Blenky.*"

"21, Hope-street, Liverpool, February 6, 1852."

THE EREBUS AND TERROR.

Franklin's Expedition sailed from Sheerness on the 26th May, 1845, and arrived at the *Whale-fish Islands* on the 4th of July. His last despatches were from this point, bearing date July 12. The EREBUS was spoken on the 22nd of the same month by Captain Martin, of the ENTERPRISE, in lat. 75° 10', lon. 66° west.

The latest date at which the expedition was actually seen was four days subsequently. The PRINCE OF WALES, whaler, reported that on the 26th of July, 1845, she saw Franklin's vessels in lat. 74° 48', lon. 66° 13'. They were then moored to an iceberg, awaiting an opening in the middle ice to enable them to cross over to *Lancaster Sound*.

Between this period and the 23rd of August, 1850, when the first traces were discovered by Captain Ommaney at *Cape Riley*, no intelligence, direct or indirect, was received of the missing ships. The evidences afforded by these first traces were added to four days afterwards (on the 27th) by Captain Penny's alighting, at *Beechey Island*, upon the spot where Franklin spent his winter of 1845-6.

Our positive accounts of the Expedition extend, therefore, up to the middle of 1846, as to time, and to *Beechey Island*, as to place.

Writing in April, 1852, five years and three quarters have elapsed since Franklin started anew upon the prosecution of his enterprise; and the probabilities (as we have said in another place) point most strongly to his having pursued it northwards up *Wellington Channel*.

Now we have seen, from the Narrative given at page 51, how three sailors, comparatively destitute of every appliance and resource, existed for upwards of six years,* almost with comfort, in a land far more Arctic in latitude than any attained by the recent searching parties. We have seen that when released from their cold and barren solitude their health and strength were complete; and there is nothing to show why, in the absence of rescue, they might not have continued to prolong life for an indefinite number of years. The conclusion is, therefore, in our humble opinion, both inconsiderate and premature, which—resting upon the merely negative evidence afforded by the absence of trace or intelligence during five years and nine months—deprecates as hopeless all further search, and would coldly and placidly suffer the fate of our brave countrymen to lurk for ever in obscurity.

(From Murray's Navy List, 1851.)

EREBUS.		TERROR.			
Screw Discovery Ship, 30-Horse Power.		Screw Discovery Ship, 30-Horse Power.			
	1845.		1845.		
Captain . . .	Sir John Franklin . . .	8 Mar.	Captain . . . F. R. M. Crozier . . .	8 Mar.	
Commander . .	James Fitzjames (Capt.) . .	4 Mar.	Lieutenant . .	Edward Little (Com.) . .	4 Mar.
Lieutenant . .	Graham Gore (Com.) . .	8 Mar.	" . .	G. H. Hodgson . . .	4 Mar.
" . .	H. J. D. Le Vesconte . .	4 Mar.	" . .	John Irving . . .	13 Mar.
" . .	J. W. Fairholme . . .	13 Mar.	Ice Master . .	Thos. Blenky (Act.) . .	23 Apl.
Ice Master . .	James Read (Act.) . .	26 Mar.	Surgeon . . .	John S. Peddie . . .	12 Mar.
Surgeon . . .	S. S. Stanley . . .	11 Mar.	Mates	F. J. Hornby (Lieut.) . .	4 Mar.
Paym. & Purs. C. H.	Osmer	4 Mar.	"	Robert Thomas (Lieut.) . .	14 Mar.
Mates	R. O. Sargent (Lieut.) . .	15 Apl.	Assist.-Surg.	Alex. McDonald . . .	11 Mar.
"	C. F. Des Vaux (Lieut.) . .	4 Mar.	Sec. Master . .	G. A. Macbean . . .	31 Mar.
"	Edward Couch (Lieut.) . .	14 May	Chk. in Ch. . .	E. J. H. Helpman . . .	4 Mar.
Assist.-Surg.	H. D. S. Goodair . . .	11 Mar.			
Sec. Master . .	H. F. Collins	4 Mar.			
56 Petty Officers, Seamen and Marines.		57 Petty Officers, Seamen and Marines.			

* These Russians were at *Spitzbergen* six years and three months. Franklin's absence from *Beechey Island* is less than six years.

SEARCHING EXPEDITIONS.

The following are the vessels engaged, or about to be so, in the search after Franklin.

1. **ENTERPRISE.** Captain R. Collinson.
Sailed from England for *Behring Strait* on the 10th January, 1850. She penetrated some distance to the north and west of the *Strait* in the course of the season, but passed the winter of 1850-51 at *Hong Kong*. She departed afresh in May, and our last accounts, brought by the *DÆDALUS*, report her having quitted *Port Clarence* on the 10th July 1851, for the purpose of carrying on her explorations to the north-east. For officers, *see* p. 11.
2. **INVESTIGATOR.** Commander R. J. McClure.
Consort of the *ENTERPRISE*. Sailed from England for *Behring Strait* January 10, 1850. Last seen by the *PLOVER* off the *Seahorse Islands*, to the westward of *Point Barrow*, on the 4th August 1850. (Lat. $70^{\circ} 44' N.$, long. $159^{\circ} 52' W.$) She was then steering to the north with a strong south-west wind, and had an open sea ahead for some distance. Capt. McClure's intention was to pass on to the eastward for *Cape Bathurst*, where he purposed wintering. From this point he would endeavour in the following summer to make the best of his way north-east to *Banks Land*. In a letter dated July 20, 1850, Capt. McClure states, that "no alarm need be felt should the *INVESTIGATOR* not be heard of until 1854." For officers, *see* p. 11.
3. **PRINCE ALBERT.** Captain Kennedy.
Sailed from Stromness June 3rd, 1851, for the purpose of exploring *Prince Regent's Inlet*, and to the south. But would endeavour first to make *Griffith Island*, and would be guided by such information as might have been left there by Capt. Austin. She was in communication with Capt. De Haven's vessel in the following August, and was last seen by that officer on the 13th, in the neighbourhood of *Baffin Islands*.
4. **ASSISTANCE.** Captain Sir E. Belcher.
Will sail from England in the course of April for the purpose of thoroughly exploring *Wellington Channel*. Will be accompanied by Nos. 5, 6, 7, and 8. For officers, *see* p. 94.
5. **RESOLUTE.** Captain H. Kellett.
Consort of the *ASSISTANCE*. Will sail in April. For officers, *see* p. 94.
6. **PIONEER.** Screw steamer, 60-horse power. Commander M'Clintock.
Accompanies the *ASSISTANCE* and *RESOLUTE* to *Wellington Channel*.
7. **INTREPID.** Screw steamer, 60-horse power. Lieutenant Osborn.
Accompanies the *ASSISTANCE* and *RESOLUTE* to *Wellington Channel*.
8. **NORTH STAR.** Commander Pullen. Store ship to Nos. 4, 5, 6, and 7, will be stationed at the mouth of *Wellington Channel*.
9. **ISABEL.** Steamer, 250 Tons. Captain D. Beatson. On the point of sailing for *Behring Strait*. When there, will endeavour to explore first to the west and north, and afterwards to the east. Crew consists of twelve persons, and is provisioned for five years.*

To these may be added the *PLOVER*, Commander Moore, stationed at *Port Clarence, Behring Strait*, as a reserve or store ship to the *ENTERPRISE* and *INVESTIGATOR*.

* See p. 83.

LETTER FROM CAPTAIN BEATSON TO SIR RODERICK MURCHISON,
PRESIDENT OF THE ROYAL GEOGRAPHICAL SOCIETY.

"36, Moorgate Street, 12th Jan. 1852.

"SIR,—The subject of search for Sir John Franklin having been so frequently discussed by the members of this scientific society, and others well acquainted with the navigation of the Polar regions, I think it would be presumptuous in me to attempt an explanation of my reasons for commencing the search from the north-west of *Behring's Straits*. I believe that many are of opinion that a high northern latitude may be reached through the open water seen by Wrangel, and that subsequently an eastern passage may be forced by a screw steamer. I may, however, be permitted to mention that this is no hasty idea of mine, but one which I have had in contemplation for above two years. On my arrival from Africa at the close of 1849, after the return of Sir James Ross, I began to think seriously of the probable causes of Sir John Franklin's detention; and while in Russia last winter, in speaking upon the subject with some officers of the imperial navy who had been in the Arctic seas, I found that their opinions were exactly the same as mine; namely, that Sir John would pass to the northward of *Parry Islands*, and never think of returning back till in the meridian of *Behring's Straits*. They were also of opinion that when he arrived thus far, he would be prevented from getting to the southward by a chain of islands extending far to the westward, a continuation, in fact, of the *Parry Islands*.* Supposing, now, Franklin to have succeeded in getting so far to the westward, and being stopped there, it cannot be imagined that he would relinquish the attempt to get through this last barrier to all his hopes, and the realization of the passage into the *Pacific*,—to retrace his steps from a point which may have taken four years to reach. What would a brave man do in such a case? Certainly not retreat in two or even three years, particularly if, as we hope, they have met with sufficient animal food to support them. I believe Sir John Franklin to be somewhere to the north of *Behring's Straits*, and certainly not far to the eastward; and in that belief I wrote to Lady Franklin in October last, stating my plan and soliciting her assistance, which, I am happy to say, was immediately given. I have since then exerted myself in selecting a suitable vessel, which I have purchased, and which is now in dock undergoing the necessary alterations. She is a schooner of nearly 200 tons, but capable of carrying a much larger quantity. I intend fitting her with three separate engines of eight-horse power each, with separate boilers, by which arrangement I can effect an immense saving of fuel, by only working one or more engine as circumstances may require. In addition to this, I take a steam launch with an engine of five-horse power. My crew will consist of only fifteen men and myself. I shall, by a careful selection of provisions, be enabled to take enough for five years. The whole of these arrangements I expect to have completed, and be able to leave *England* by the end of next month, and to proceed direct to the *Sandwich Islands*, whence, having filled up with coal, etc., to push on for the *Straits*, which I hope to be able to enter by the middle or latter end of July. When there, of course I must be guided by the condition of the ice. If there is a possibility of getting to the north, on or about the meridian of the *Straits*, I shall do so; otherwise, I intend pushing my way to the north-west till I arrive at the open water seen by Wrangel, when perhaps I may be able to get to the north, and then to the east. Should I not succeed in getting so far along the coast this year, I might employ the spring (before the breaking up of the ice) in an attempt to reach that land seen by Captain Kellett from *Herald Island*, and thus be enabled to perform one part of the

scheme proposed by Lieutenant Pim. I would next in the spring push away to the north and east, in which direction I believe I shall eventually find some traces of our missing ships. I consider it would have been desirable (and, in fact, it was my first intention) to have had another smaller screw steamer as a tender, and of far greater power. I am sorry to say that I am not able to accomplish this, but am, nevertheless, determined to go in the best way I can.

"I have, etc.,

"Donald Beatson."

CAPTAIN BEATSON'S EXPEDITION.

(From the "Illustrated London News," March 27th.)

"The Royal Geographical Society held a meeting at the Royal Institution, Albemarle-street, on Monday; Sir Roderick Murchison in the chair.

"Captain Beatson gave a general description of his steamer, the *ISABEL*, 250 tons, in which the search will be performed, the precautions used to enable the vessel to resist the pressure of the ice, the number of boats, among which is a life-boat, and the general equipments, which are most complete, and proceeded to detail the general features of his proposed expedition. He said that his crew would consist of twelve persons, and they should be provided with provisions for five years, giving each person one pound of meat without bone, and one pound and a half of bread, and other stores in proportion, which could, if necessary, be made to last seven years, or even more. They were armed with carronades, and through the generosity of the Master-General and the Board of Ordnance, they were abundantly supplied with powder, shot, rockets, and blue lights. The course he proposed to take was to proceed from England at once to the *Straits of Magellan*, through which he would pass into the Pacific and direct to *Callao*, where it was proposed to fill up with coals, and, after refreshing the crew, proceed direct to *Behring's Straits*, unless he should find it possible to get a further supply of coals at the *Sandwich Islands*. When he arrived at the ice, he should, of course, be guided by circumstances. His wish, however, was to push to the north and west along the Asiatic shore, to clear the shoals on which the heavy ice may have grounded to the north of the *Straits*—to get to the north as far as possible this year—perhaps off the land seen by Captain Kellett. As soon as possible after the breaking up of the winter, he said he should explore to the east and north-east with sledges,* by which his future operations must be guided; but if he could not this year get so far, he would winter as far to the north-west as possible on the Asiatic

* "I believe I have been the first to construct a boat to ply to windward on ice. In 1828-9, I made several experiments on the river St. John, New Brunswick, and, after spending the beginning of two winters in making experiments, succeeded in being able to ply to windward at the rate of twenty-five miles per hour, forming right angles each tack, and with a strong breeze I have gone at the rate of forty miles per hour, close-hauled on the wind, with seven men on board as ballast; and, I believe, a speed equal to any locomotive engine can be obtained with a well-constructed boat and good runners on smooth ice. I had some difficulty in steering, but, ultimately, succeeded to my satisfaction.

"Having had a description of the ice met with in the Arctic sea from some of the officers of the late expedition, they all describe it as irregular and very rough; but, notwithstanding, I believe a boat can be constructed to meet all the objections. I do not say that a speed equal to what I have stated could be got on such ice, but I do believe a speed of from seven to ten miles per hour could be obtained with little difficulty where the ice is not too rough. Captain Penny told me that, with a rudely-constructed sledge, made on board his own ship, he has sailed at the rate of five miles per hour, but had difficulty in steering it. As it is likely a good deal must be done by sledge parties by the next expeditions, I would press the necessity of providing such ice-boats, such as I have proved to answer so well, for each vessel. The tent cloth would make the sail. Only see what relief it would be to the men to have the least wind, when the sails would fill, which would help so much that, with anything of a fresh breeze, they could sit on the boat. I believe a much greater distance would be accomplished, with less fatigue and additional security, with such a sledge as I have alluded to, when compared with the rudely constructed sledge used in the last expeditions. The runners will not impede the boat in the water. Each half boat is a separate boat and sledge in itself, and can be constructed to weigh very little."—*Mr. W. Coppin, in a Letter to the "Liverpool Advertiser," Jan., 1852.*

shore, and explore that coast to the north-west, previous to starting, in the spring. Upon every accessible cape or hill, he should embrace every opportunity of erecting a cairn or cross, and deposit a notice of his intentions, in a bottle or canister, at twenty feet magnetic north from the pole or cairn; and as they would take out an alphabet made of iron, every opportunity would be taken to burn the ship's name, with date and position, upon as much drift wood as could be spared, and thrown overboard. It was his intention to use every endeavour to get to the eastward; but, failing in that, by the situation of the land or condition of the ice, then he should make to the north, in the belief that if Sir John Franklin had arrived in or about the 150th meridian, and had been there arrested by land, he would probably try to make to the west in a higher latitude. That course he hoped to be able to follow year by year till he had sufficiently explored that part of the world which those competent to judge believed him to have reached. He humbly prayed that Almighty God would give him strength to perform the task which he had so much at heart; and if he was so unfortunate as not to meet with any traces of them, he should be enabled at least to return to his country with satisfactory proofs of their not having reached that part, and the happy consciousness of having done his duty.

"Captain Beatson resumed his seat amidst loud and continued cheering.

"Lieutenant Pim,* as one deeply interested in the success of the expedition, wished to call the attention of Captain Beatson to the abundant supply of vegetable life in the Arctic regions, where he would find eight different kinds of plants, one of which closely resembled potatoes, and would be found very useful in the prevention of scurvy."

The following letter is from the intrepid explorer Captain Penny. It is important, not only as containing the evidence of the person who last spoke the *EREBUS*, but also from the cheering assurance it affords us of the providence and foresight evinced by Franklin whilst yet on the very threshold of his enterprise.

If the commander of the expedition anticipated the possibility of his efforts in the Arctic Seas extending to a term of seven years, surely it is premature, while a portion of that interval remains, to despair of his safety.

CAPTAIN PENNY TO THE EDITOR OF THE "TIMES".

"Aberdeen, Dec. 20, 1851.

"SIR,—I have lately been at *Peterhead* (my native place), and have learnt a very important fact from my old acquaintance Capt. Martin, who, when commanding the whaler *ENTERPRISE* in 1845, was the last person to communicate with Sir John Franklin.

"The *ENTERPRISE* was alongside the *EREBUS* in *Melville Bay*, and Sir John invited Capt. Martin to dine with him, which the latter declined doing, as the wind was fair to go south. Sir John, while conversing with Capt. Martin, told him that he had five years' provisions, which he could make last seven; and his people were busily engaged in salting down birds, of

* This gentleman's projected expedition in search of Franklin via *Siberia* (an account of which will be found at p. 41), has been abandoned. The difficulties presented by the overland journey were, in the opinion of the Russian authorities, insuperable. Lieutenant Pim has returned, therefore, from *St. Petersburg*, and the residue (£362) of the funds with which he was furnished has been applied in aid of Captain Beatson's enterprise.

which they had several casks full already, and twelve men were out shooting more.

"To see such determination and foresight at that early period is really wonderful, and must give us the greatest hopes.

"I asked Capt. Martin why he had not mentioned this before? He said that he did not at first think it of any importance, and that when Lady Franklin was at *Peterhead* about two years ago, he did not like to intrude upon her ladyship (not having the honour of knowing her) during her short stay. He is a man of the strictest integrity, whose word I can depend upon. He has an independent fortune, which he got by fishing.

"Your most obedient servant,

"William Penny."

TESTIMONIALS TO HENRY GRINNELL, ESQ.

(From the *New York Daily Tribune*, Nov. 15, 1851.)

"About a dozen of the English friends of Mr. Grinnell, yesterday presented him with a beautiful gold medal, commemorative of his Polar Expedition. The subscribers to this little affair were exactly twelve, and there was a peculiar propriety in the compliment, from the fact of English, Irish, and Scottish gentlemen being among the contributors: the three kingdoms were all represented.

"The medal is of the purest gold, and of exquisite workmanship; and, besides a sketch of the two vessels, depicted in their icy prison-house, contains the following inscription:—

"*The British residents of New York to Henry Grinnell, in grateful admiration of his noble effort to save Sir John Franklin.*"

A week previously silver medals had been presented to the crews of the *ADVANCE* and *RESCUE*. The account in the *New York Tribune*, after giving the speech of Dr. Bartlett (with whom the idea of presenting a medal originated) on the occasion, goes on to say:—

"His daughter, Mrs. Le Gal, then affixed on the left breast of each the medal, suspended by a silk ribbon, and presented each of them at the same time with a small box, containing a five-dollar gold piece. At the conclusion of the ceremony, Commander Wilson called for three cheers, which, at a signal from the boatswain's whistle, were given vociferously. The band then struck up 'Hail, Columbia!' and wound up with 'God save the Queen,' etc.

On the 4th November, a complimentary dinner was given by the British residents in honour of this liberal and estimable gentleman. A lengthened report of the proceedings is contained in the *New York Express* of the day following.

Subjoined is the correspondence relating to the medal:—

"To HENRY GRINNELL, Esq.

"New York, Nov. 13, 1851.

"Sir,—I am deputed by a few of your friends who own a British birth, to ask your acceptance of a bit of gold, on which is inscribed their sense of an important act of your life. If you will accept it—and it is presented by those who respectively claim lineage with the Three Kingdoms—they will feel both honoured and gratified.

"I am, Sir, with great respect,

"Your obedient servant,

"John S. Bartlett."

* The statement conveyed in this letter was subsequently disputed in the "Times" by "A CAPTAIN, R.N.," But the correspondence which ensued leaves little doubt as to the general correctness of Capt. Martin's report.

"REPLY.

"New York, Nov. 19, 1851.

"Dear Sir,—Your note of the 13th inst., accompanied with a beautiful gold medal, presented to me by yourself and some of your brother countrymen, I have received. I shall preserve it as long as I live, and I trust it will be handed down to my latest posterity. It commemorates an act of my life, which, I assure you, was prompted by an inward sense of stern duty, implanted in my bosom by the Almighty himself. To him, therefore, all praise should be given, and not to me, a mere instrument. I accept the medal for the influence it may have upon others, and as a token of your regard for me.

"With great respect for yourself and your companions in this matter,

"I am, Sir, your friend,

"Henry Grinnell.

"John S. Bartlett, Esq., New York."

(From the "Times", March 26th.)

"THE GRINNELL TESTIMONIAL.—The following characteristic letter from Mr. Grinnell, declining to receive the proposed national token of gratitude, has been received by the committee; in consequence of which, we understand that it is in contemplation to return to the subscribers the money received for the purpose.

"New York, Feb. 24.

"Gentlemen,—The report being confirmed by the last arrival from England of your generous intention to present me with a memorial of British gratitude for my efforts for the relief of Sir John Franklin, I beg to transmit by the first steamer my grateful sense of the feelings which have dictated the movement, and to request most earnestly that you will dedicate to the recovery of the missing navigators any sums you may have collected for the purpose. I claim no merit for my expedition; the cause of Sir John Franklin is the cause of universal humanity, and my country would have reaped as much advantage as yours had he succeeded in opening the icy gates of the Arctic regions. I only regret that the aid was so ineffectual, and am earnest in hopes that the coming season will witness more powerful efforts to assist in the recovery of those brave men who have perilled life for the advancement of knowledge, to benefit not England alone, but the whole world. Gratefully appreciating your honourable motives, I beg to decline receiving a testimonial for an act which was simply a duty, especially urgent upon the citizens of this maritime commonwealth.

"With sentiments of great respect,

"I am, Gentlemen, your friend,

"Henry Grinnell.

"To Sir John Ross, Sir W. Edward Parry,
Captain W. Penny, and others."

THE FAREHAM LIFE-BOAT.

(From the "Nautical Magazine," March, 1852.)

"If it be admitted as a great desideratum, that every sea-going vessel, and especially every passenger-steamer and emigrant-ship, should carry life-boats enough for any emergency, and which, while they possess every necessary qualification as sea-boats, shall be quite out of the way of everything else, and neither hamper a ship's decks nor sides, then the boat to be described has a strong claim upon the attention of the public. This newly invented collapsible boat, which gained a prize medal at the Great Exhibition, has

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been fully tried upon a considerable scale, and is found to possess advantages beyond the inventor's most sanguine expectations. It combines strength with lightness in a degree far exceeding any other boat; it is quite insubmersible, being light even when full of water, and freeing itself very rapidly. It shuts into one-fifth of its beam,—e. g. a boat ten feet wide shuts into two feet. The expansion is effected in *one second* entirely by its own weight, and when expanded, oars, masts, sails, etc., are all found in their places.

"It is a most excellent sea-boat, pulling very lightly, and in sailing, especially on a wind, it is superior to every other boat of equal draught.

"It is stowed outboard, frapped to by girdles against the ship's bulwarks or hammock nettings, and there presents scarcely anything for wind or sea to act upon. Owing to its extreme lightness and small dimensions when stowed, the very largest boats (even big enough to carry 500 persons) may be carried outboard without inconvenience.

"Such is a brief enumeration of some of its qualities and peculiarities; we will proceed next to state the manner in which the Fareham life-boat is constructed.

"The framework, which is of wood, American elm, is composed of broad, thin, and flat timbers running fore and aft; these are all joined together at the ends with a peculiar but simple *chain hinge*. The boat shown in the engraving has eleven such timbers, five on each side the keel; when shut, these all lie side by side like the leaves of a closed book; and when open, they assume the positions of planes radiating from a common axis.

"On each of the edges of these timbers is stretched a covering of strong thick felt coated with india-rubber; thus the boat is doubled into ten longitudinal cells or compartments all distinct and separate, so that injury to one does not affect the buoyancy of the others.

"The ends of the timbers all abutt against a semi-cylindrical block at each end, which, in addition to other advantages, closes the apertures at which the air enters the cells.

"The platform, which is jointed along the middle, is jointed also to one pair of timbers, and all the thwarts similarly to another. These compose the chief extenders of the boat.

"The great strength, which is truly astonishing, is owing to the *plank-on-edge* principle; these radial planes combining together to produce extreme rigidity; while the two coverings binding the edges of the timbers in every direction, a structure is produced far exceeding anything else in the combination of strength with lightness.

"It should be well observed that, though so light, this boat is extremely stiff and quite unequalled in weatherly qualities, depending upon the peculiar form which the bottom takes when in the water. The slightly elastic material yields a little, and rises in *faint grooves* between the timbers, immensely increasing the lateral resistance. The finest and most beautiful lines can be easily obtained upon this principle. The expense of these boats is less than other life-boats."

MODEL OF THE ARCTIC REGIONS. (From the "Illustrated London News.")

"We have been much pleased and instructed by a visit to a model of the Arctic regions, in a room devoted to it in Mr. Wyld's exhibition of the Globe, in Leicester-square. It shows the physical construction of that part of the world, and exhibits the elevations on the surface as in nature. The route of the Franklin missing vessels is also laid down with plainness and accuracy, in such a way as to be easily traced and understood. The investigation will prove interesting to the inquirer, besides being in itself a work of high art, implying infinite elaboration, both in detail and as a whole."

SIR EDWARD BELCHER'S EXPEDITION.

(From Murray's List, April 1852.)

ASSISTANCE.		1852	RESOLUTE.		1852
Discovery Ship.			Discovery Ship.		
Captain	Sir Edward Belcher	10 Feb.	Captain	Henry Kellett	10 Feb.
Commander	G. H. Richards	10 Feb.	Comm. Addit.	F. L. McClintock	10 Feb.
Lieutenant	W. M. May	14 Feb.	(For service in INTREPID.)		
"	J. P. Cheyne	18 Feb.	Lieutenant	G. F. Meham	14 Feb.
Addit.	Sherard Osborn	10 Feb.	"	B. C. T. Pim	14 Feb.
(For service in PIONEER.)			"	R. V. Hamilton	16 Feb.
Master	J. F. Loney	14 Feb.	Master	G. F. McDougall	14 Feb.
Addit.	J. H. Allard	10 Feb.	Addit.	F. J. Krabbé	10 Feb.
(For service in PIONEER.)			(For service in INTREPID.)		
Surgeon	David Lyall, M.D.	16 Feb.	Surgeon	W. T. Donville, M.D.	16 Feb.
Mate	J. B. Grove	20 Feb.	Mate	Richard Roche	16 Feb.
Assis.-Surg.	J. B. Richards	9 Mar.	"	G. S. Nares	16 Feb.
Addit.			Assist.-Surg.	R. C. Scott	25 Feb.
(For service in PIONEER.)			Addit.		
Clk. in Chge.	James Lewis	11 Feb.	(For service in INTREPID.)		
			Clerk in Chge.	W. H. Richards	16 Feb.

NORTH STAR.		1852
Store Ship.		
Commander	W. J. S. Pullen	20 Feb.
Mate	A. H. Alston	21 Feb.
Surgeon	Robert McCormick	21 Feb.
Second Master	William Shellabeer	5 Mar.
Clerk in Charge	William Elliott	21 Feb.

Sir Edward Belcher's Expedition will be provisioned for three years; but, irrespectively of this, an additional supply will be carried out by the NORTH STAR. This, together with the stores left at *Port Leopold* by Sir James Ross in 1849, would enable the present expedition to remain out five or six years.

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